City and County of San Francisco
Department of City Planning

**Environmental Impact Report** 

# 135 Main Street Building

Supplemental

EE81.61

State Clearinghouse Number 81122913

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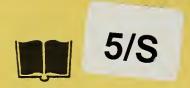
Publication Date: September 3, 1982

Public Comment Period: September 3, 1982 through

October 7, 1982

Public Hearing Date: October 7, 1982

Written Comments should be sent to the Environmental Review Officer, 450 McAllister Street, San Francisco, CA 94102



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135 Main Street building, 1982.

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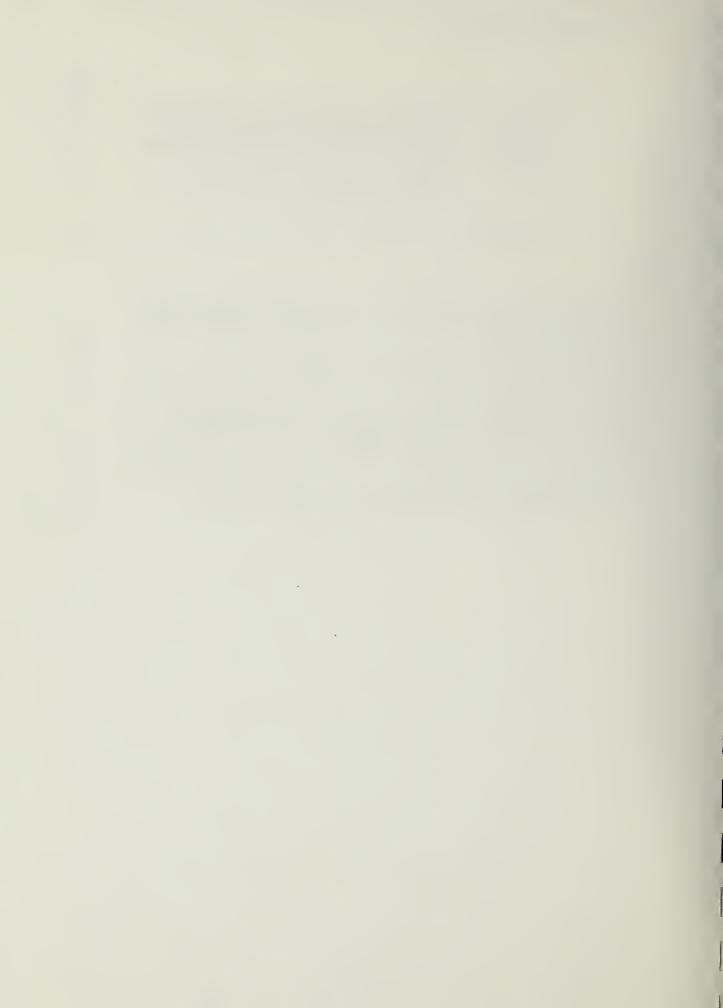
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#### I. THE PURPOSE OF THIS SUPPLEMENTAL EIR

This Supplement to the Environmental Impact Report (EIR) for the 135 Main Street Building project has been prepared under an Interlocutory Order and Writ of Mandamus entered by San Francisco Superior Court Judge Daniel Weinstein in San Franciscans for Reasonable Growth v. City and County of San Francisco, Norland Properties, Real Party in Interest, Super. Ct. No. 794474. (The Superior Court's Memorandum of Interlocutory Decision and Order, Writ of Mandamus, and Interlocutory Judgment are contained in Appendix A, page 45.)

On March 25, 1982, the San Francisco City Planning Commission certified the Final EIR for the 135 Main Street Building project (Resolution No. 9356) and approved the 135 Main Street project (Resolution No. 9357). On May 17, 1982, San Franciscans for Reasonable Growth brought suit under the California Environmental Quality Act challenging the Planning Commission's action.

After trial, Judge Weinstein upheld the City Planning Commission's actions with two exceptions. First, he found that the Commission failed to explain why the EIR analyzed cumulative impacts resulting from the 2.6 million square feet of development in the approximate two-block area around the 135 Main Street project, rather than from development in the entire downtown commercial (C-3) district as was done in other EIRs certified by the City Planning Commission. Second, Judge Weinstein concluded that the Planning Commission did not adequately explain its finding that the project would not contribute to significant cumulative impacts on air quality.

Accordingly, Judge Weinstein suspended all City approvals and permits for the project,/l/ remanded the matter to the Planning Commission and ordered that the Planning Commission reconsider Resolutions 9356 and 9357.

Judge Weinstein's Order sets forth a procedure for the Planning Commission's reconsideration. First, this Supplemental EIR was to be prepared and reviewed in accordance with the California Environmental Quality Act and the State CEOA



Guidelines addressing the cumulative impact and air quality issues described above./2/

Second, after completion and certification of the Final Supplemental EIR, the City Planning Commission is to reconsider the 135 Main Street project in light of the EIR and the Supplemental EIR.

Third, the City may allow any person objecting to the Planning Commission's approval or disapproval of the 135 Main Street project to appeal to the Board of Permit Appeals within 10 days after the adoption of the City Planning Commission resolution approving or disapproving the project and posting a notice of the adoption of such a resolution.

Any objection to the certification of the Supplemental EIR by the City Planning Commission must be made to Judge Weinstein within 30 days after filing of the Notice of Determination. Any other objections to any action taken by the City Planning Commission or Board of Permit Appeals in connection with the Court's order must be presented to Judge Weinstein within 15 days after the action or inaction complained of.

After this process is complete, Judge Weinstein will render a final decision in the lawsuit brought by San Franciscans for Reasonable Growth.

This Supplemental EIR contains current analyses of the cumulative effects of the proposed project under the categories of Employment, Housing, and Fiscal Factors, Transportation, Air Quality, and Energy. Under each topic discussed, those portions of the EIR which are replaced by new or updated information are identified. Additions to the EIR discussion are also noted. This report supplements or modifies the EIR published on December 18, 1981 and certified on March 25, 1982 in order to comply with the Superior Court's Order. Although not required by the Court order or CEQA, the Supplemental EIR also provides additional information for the use of the City Planning Commission.



#### NOTES - Purpose of this Report

- /l/ Except to the extent necessary for Norland Properties to complete demolition of structures on the site which were partially demolished, and to secure the site in the interest of public safety.
- /2/ The public review procedures applicable to Supplemental EIRs are set forth most specifically in Sections 15067.5 and 15085(d) of the State CEOA Guidelines, (14 California Administrative Code, Sections 15067.5 and 15085(d).)



This Supplemental EIR for the 135 Main Street project has been prepared to provide additional information as required by an Interlocutory Order and Writ of Mandamus by the San Francisco Superior Court. Included are current analyses of the cumulative effects of the proposed project and downtown office development under the categories of Employment, Housing, and Fiscal Factors, Transportation. Air Quality, and Energy.

The project would contribute approximately 260,000 gross square feet of office space to the net addition of 16.1 million gross square feet of new office construction and 0.536 million gross square feet of net new retail construction considered in the cumulative analyses. The impact of the project and cumulative office development on housing would be mitigated in part by the agreement of the project sponsor and other developers to provide units of housing under the Office Housing Production Program. Total General Fund revenues from the project would be about \$952,900.

The person trip ends during the weekday p.m. peak hour resulting from cumulative office and retail development would be approximately 48,000, of which 750 would be attributable to the project. The project would add approximately 190 p.m. peak-hour trips to Muni, which is about 1.6% of the demand resulting from cumulative development. Cumulative traffic would degrade service levels to F at the intersections of Mission Street with Main and Beale Streets near the project. The parking demand generated by the project would represent 1.6% of the total cumulative office demand.

Air quality standards would not be exceeded when the project and all cumulative development is in place. Project-related emissions would add less than 1/100 of a percent to the projected emissions in the Bay Area Air Basin. Cumulative emissions would make up less than one percent of the projected regional total in 1987. Cumulative increases in energy demand would be about five trillion Btu annually; the project would cause about one percent of this increase. Cumulative office demand would not require PG&E to alter its service plans.



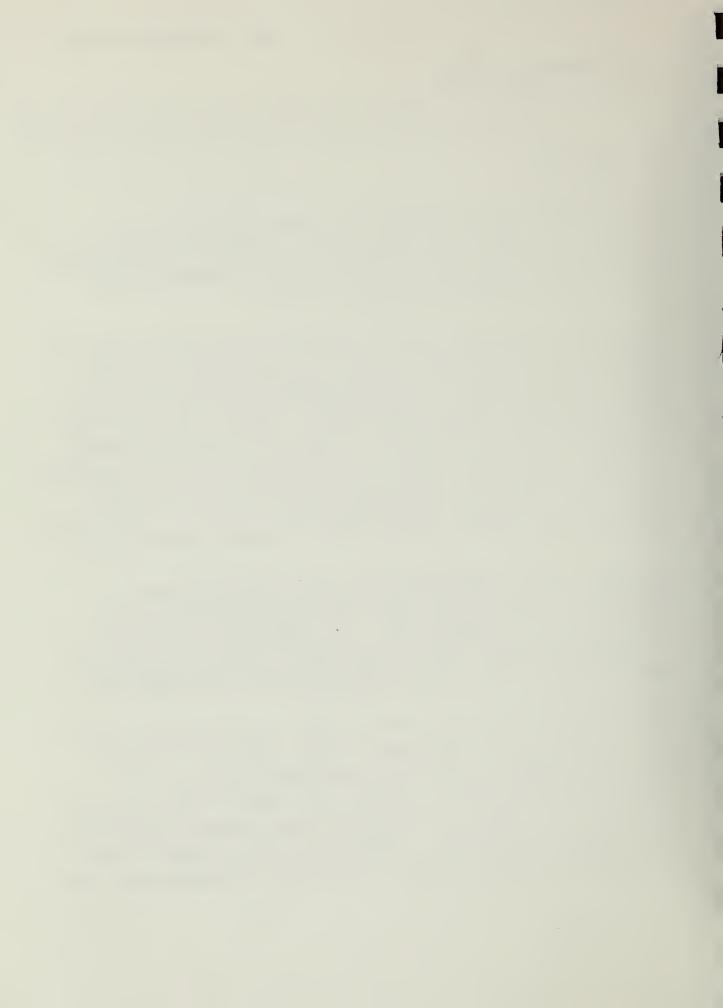
#### A. CHANGED CONTEXT

Since publication of the Draft EIR on the 135 Main Street project on December 18, 1981, some changes have occurred in the physical setting of the project. The changes do not affect the basis for the original analyses, however, but are noted here as updated information.

The project site has been cleared of the two-story brick building formerly at 115 Main Street and the two-story concrete structure formerly at 135 Main Street. All of the two-story buildings bordering the site to the north and fronting on Mission Street have been vacated. These are on the site of the proposed Mission-Main Building, which is expected to be under environmental review in the last quarter of 1982. On-street parking in front of the project site is now parallel, rather than diagonal extending informally over the sidewalk. The yellow truck loading zone markings on the curb in front of the site have not been removed although the area is used for automobile parking.

Construction has just begun on two of the four buildings in Assessor's Block 3717, the 135 Main Street block, which were undergoing planning and environmental review in December 1981. This construction is at the 101 Mission Street (at Spear Street) office building site and at the Spear-Main (160 Spear Street) office building, immediately south of the project site.

The building behind the site at 150 Spear Street is nearing completion and is partially occupied by its prime tenant, the Bank of America. The Pacific Gateway Building opposite the site has been topped out and most of its exterior cladding is in place. The Federal Reserve Bank, in the block north of the site, has been fully enclosed by granite walls and glass windows while interior construction continues. In addition, an office building is under construction at 141 Steuart Street, one block east of the project block. The



Jewish Welfare Foundation Building at 121 Steuart Street and the 201 Spear Street Building have been approved for construction by the City. (See Table C-1, page 64.)

#### B. EMPLOYMENT, HOUSING, AND FISCAL FACTORS

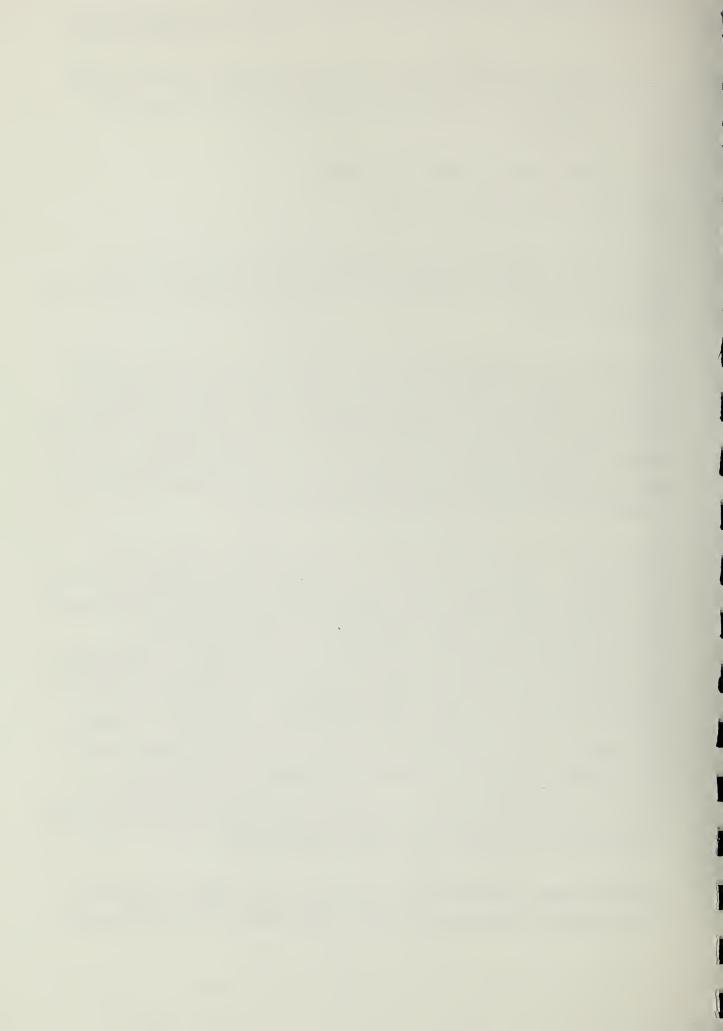
EMPLOYMENT AND THE OFFICE SPACE MARKET

(This section replaces the second paragraph on page 28a of the EIR, and describes the building lists used in the cumulative analyses discussed in this Supplemental EIR.)

San Francisco is the major office center in the Bay Area with approximately 57.2 million gross square feet of office space (see Table B-1, Appendix B, page 59). During the 1970s, space in downtown office buildings was added at a rate of about 1.5 million square feet per year. In 1981 and 1982, the average rate of office space additions was about two million gross square feet annually. Office buildings with a total space of approximately 32.3 million square feet were constructed between 1960 and 1981.

About 7.8 million square gross feet of office space is currently under construction. About 5.4 million gross square feet has been formally approved but is not yet under construction, and an additional 4.2 million gross square feet of office space is under formal review. Together these total 17.4 million gross square feet of new office space. About 1.3 million gross square feet of existing office space has been or is proposed to be demolished to clear the sites for these office developments. This results in a net addition of 16.1 million gross square feet of new office space in Downtown San Francisco. For analysis purposes, the 16.1 million gross square feet of new new space is used, for it refers to the amount of new construction in excess of existing space on each site in terms of gross square feet of floor space. If these projects were all completed, San Francisco would have a total of approximately 73 million square feet of office space.

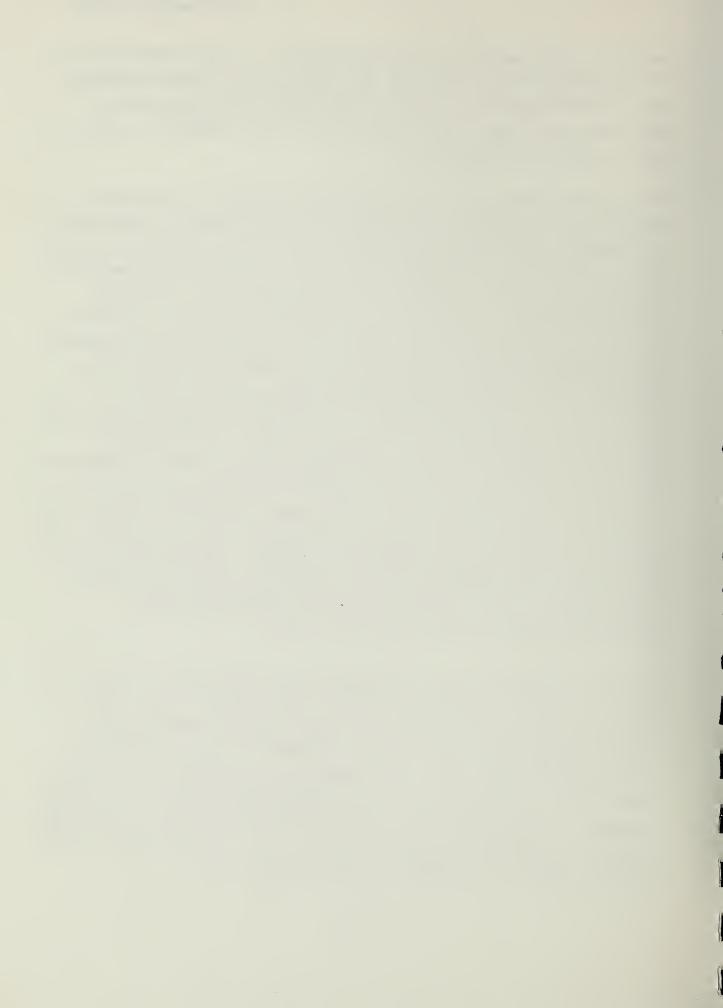
The above numbers and the cumulative analyses in this report are based on a list of office buildings, prepared by the Department of City Planning, which



on August 6, 1982 were in one of three categories: 1) under formal review by the Department of City Planning; 2) approved but not yet under construction; and 3) under construction. These buildings and the total square feet of office and retail space in each category are listed in Appendix C, Tables C-1 and C-2, pages 64 through 67./2/

The cumulative list contains only those buildings which are, or have been, formally under review by the Department of City Planning and the Department of Public Works. Not included are projects which are in an early planning stage but for which details as to types of use and floor areas of office and retail space are not available. Thus excluded are buildings in the Yerba Buena Center Redevelopment Area, Mission Bay of the Southern Pacific Land Company, the Rincon Hill-South Beach Redevelopment Area, and unfunded State and Federal office building proposals. The cumulative list does contain those office buildings in the Yerba Buena Center Redevelopment Area which are under construction or for which Land Disposition Agreements have been approved, and which have definitely identified floor area figures. The San Francisco Redevelopment Agency is currently considering a range of additional amounts of office space, but the nature and scale, including floor area, are tentative and uncertain. Therefore, potential office space in Yerba Buena Center is not included. The general basis for future development will be in accordance with the Yerba Buena Center Redevelopment Plan as amended. Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit.

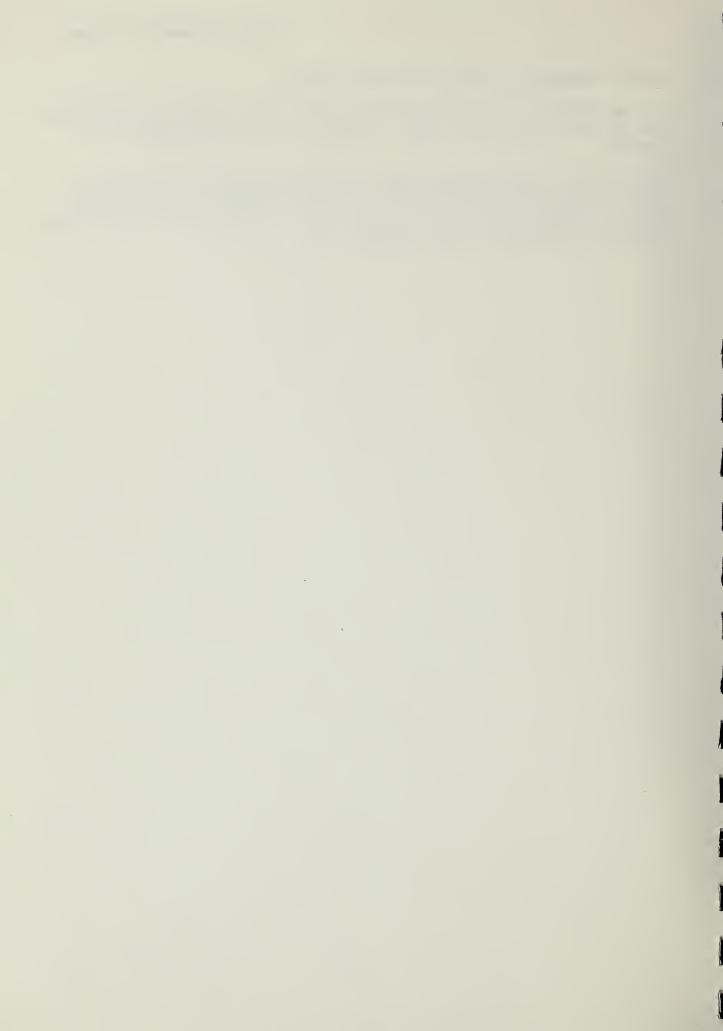
The totals indicated in Table C-2 may differ from those shown in earlier EIRs as they are based on the status of projects as of August 6, 1982. Some projects included in earlier totals have been removed from the cumulative impact analyses because they have been withdrawn from formal review or for other reasons of inactivity. On the other hand, some projects not included in earlier totals have been added to the cumulative totals because they have been activated. In sum, the lists used for the cumulative analyses in this report represent to the extent practicable the most current official record of office buildings completed, in progress, or in the review process.



NOTES - Employment, Housing, and Fiscal Factors

/1/ The figure of 29 million gross square feet cited in the EIR, page 28a, was for the years 1960 through 1980. See Table B-1 of this Supplemental EIR, page 59.

/2/ Buildings on the list are located in the C-3 district, the Van Ness corridor west to the Central Freeway, the South of Market area south to the Central Freeway, Division Street, Mission Creek, and China Basin, and the northeastern waterfront below Telegraph Hill. The area is referred to as the greater Downtown area in this Supplement EIR.



#### IV. ENVIRONMENTAL IMPACT

#### A. EMPLOYMENT, HOUSING, AND FISCAL FACTORS

#### OFFICE SPACE AND EMPLOYMENT

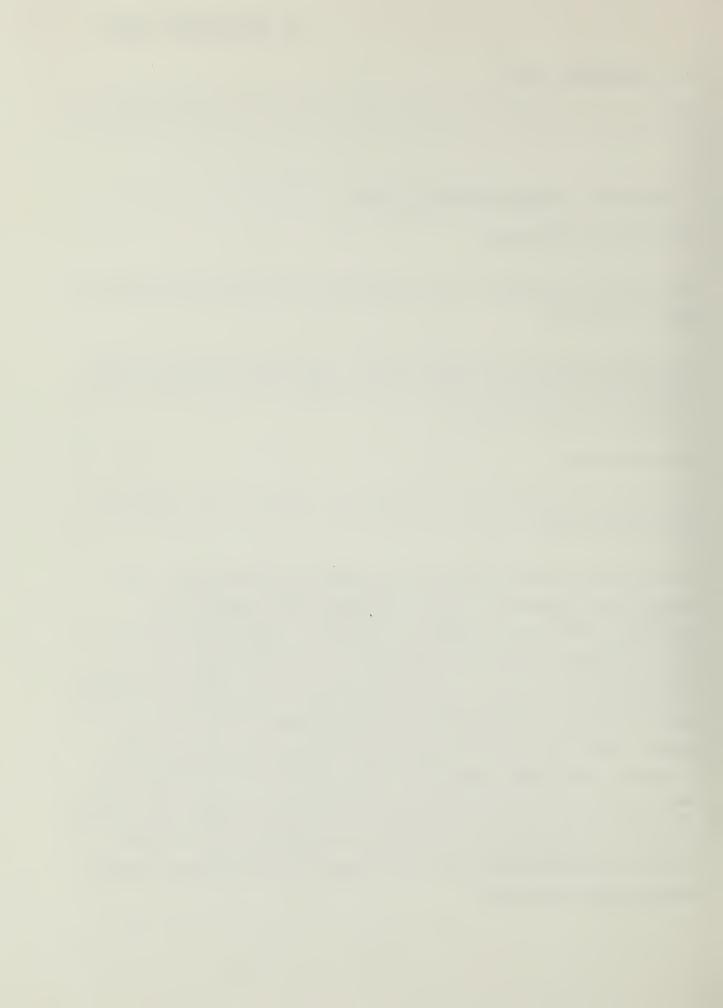
(This paragraph supplements, and is inserted at the end of, the discussion on page 71 of the EIR.)

The cumulative context of new office space, of which this project is a part, is described in the Setting section, Part B, page 6, and in Tables C-1 and C-2 in Appendix C, pages 64 and 67.

#### CUMULATIVE HOUSING

(This section supplements, and is inserted at the end of, the discussion on page 72 of the EIR.)

The relationship between downtown office growth and housing demand in San Francisco was documented in a report prepared by Recht, Hausrath and Associates, Economists, that appears as Appendix C, pages 289 through 329, of the 101 Montgomery Street EIR, certified by City Planning Commission Resolution 8941, May 7, 1981. This report is available for public review at the Office of Environmental Review, 450 McAllister Street, fifth floor, and is hereby incorporated by reference into this Supplemental EIR pursuant to Section 15149 of the California Environmental Quality Act (CEQA) guidelines. In summary, this document states that relatively high wages and employment opportunities are attracting people to San Francisco, but many people cannot afford the high housing costs in the City. The report estimated the residency patterns of new households that would be attributable to a new high-rise office building and discussed various employment growth assumptions and their housing market implications.

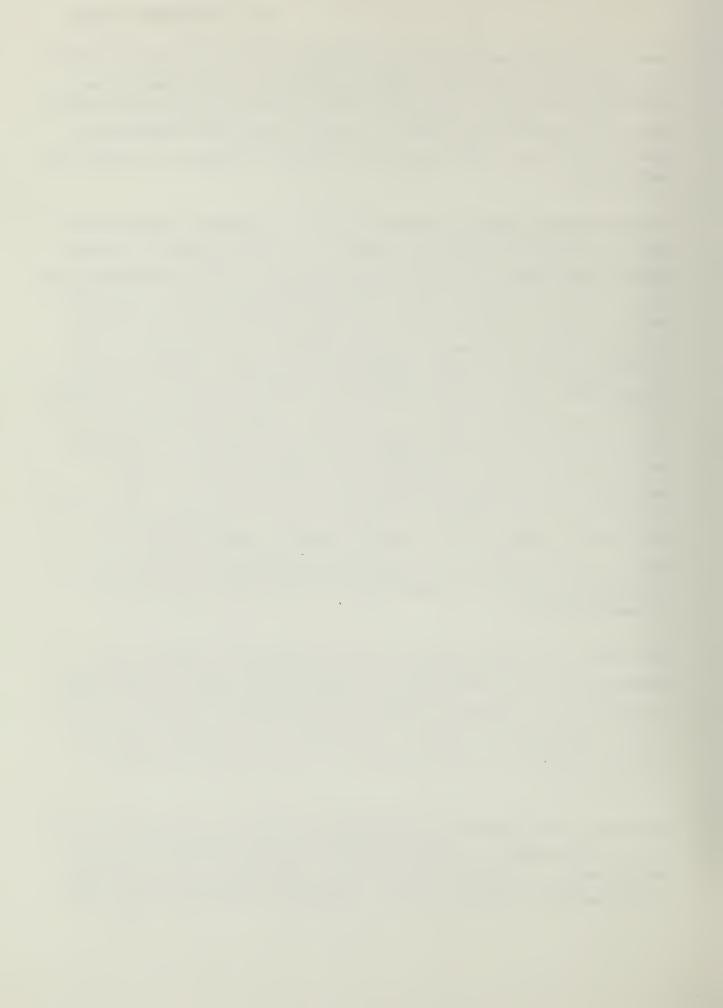


Based on the total net new gross office space in San Francisco found in Table C-2, page 67, the project would comprise 260,500 gross square feet of new office space as part of a cumulative total of about 16.1 million gross square feet of net new office space which is now under construction, approved, or under formal review. The project would be about 1.6 percent of the total new office space.

If the assumptions used and explained in the 101 Montgomery Street EIR were applied to cumulative office development, i.e., 15 to 30 percent of the new employees generated by cumulative office development would be expected to move to San Francisco and the average household would be occupied by 1.4 downtown workers, between 6,900 and 13,800 new households attributable to new office space development would add to the housing demand in San Francisco. If the assumptions used in the formula prescribed by the Office Housing Production Program (OHPP) Interim Guidelines of January 1982 were used (i.e., 40 percent of the new employees attracted to the new jobs created would want to live in San Francisco and the average househould would be occupied by 1.8 downtown workers), about 14,300 new households attributable to new office space development would add to the housing demand in San Francisco. projections of new households are based on 16.1 million gross square feet of net new office space, which includes all projects listed in Table C-1, page 64. The employment and housing projections shown in Table B-2, page 61, exclude employees in existing buildings to be demolished on the sites of proposed buildings.

This impact on the housing market would be mitigated to a certain extent because various office developers, including Norland Properties, have agreed to provide units, through City Planning Commission final approval resolutions, or have proposed units on-site./l/ Table B-2, page 61, shows the projected effects of downtown office development on the San Francisco and regional housing markets.

Cumulative office development would increase the City's current high ratio of jobs to housing supply. Housing demand would increase in an already tight housing market. In market situations where demand outstrips supply, prices can be expected to increase. Factors independent of office development and



outside the control of the City, e.g. immigration, interest rates, State and Federal tax policies, and economic trends, also influence the housing market. Quantification of the effects of cumulative office development on San Francisco housing prices is not possible.

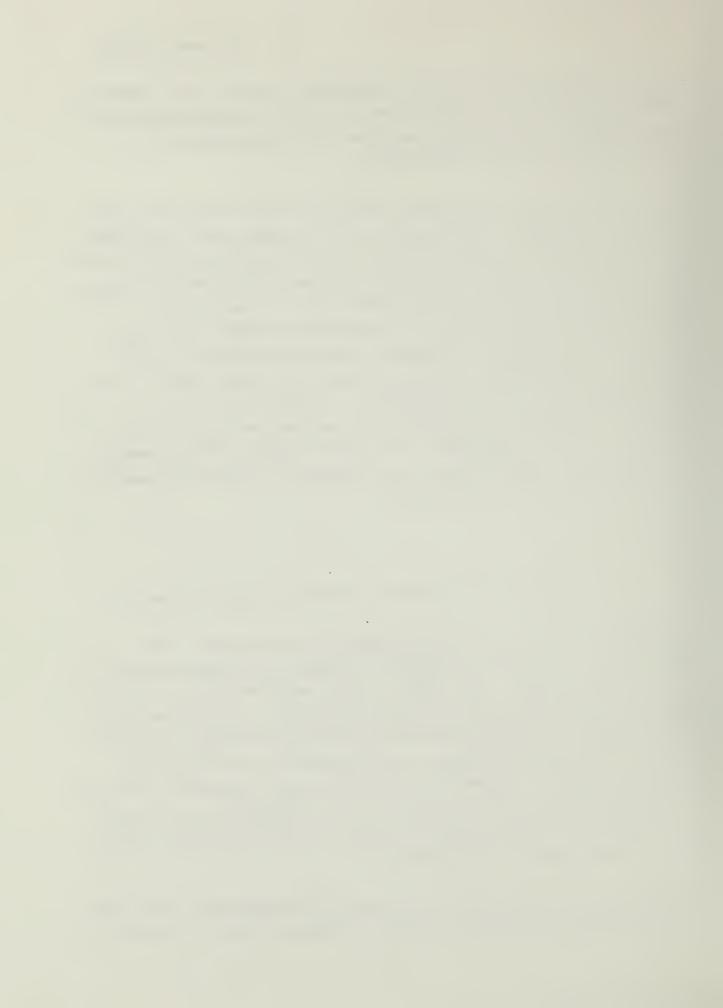
The new demand could be accommodated through additions to the housing stock, increases in the number of office workers per household, and/or displacement of existing residents. Large additions to the San Francisco housing stock are not anticipated in the near future because the housing construction industry has declined due to high costs and interest rates. The most easily developable and available sites have already been developed. Census data indicates that the number of people per household has historically been declining. This demographic trend will probably not reverse itself in the next few years due to a variety of factors, including divorces and separations, departure of young adults from families, and the increasing proportion of elderly population. It has been suggested, although there is some dispute, that gentrification -- the replacement of low-income households by more affluent ones -- would occur./2/

HOUSING AFFORDABILITY

(This section supplements the discussion of housing on page 73 of the EIR.)

A substantiated analysis of housing affordability would require, first, determination of the number of households generated by the project preferring to live in San Francisco. This figure, in turn, would be related to net employment increase and residence location preference. As new office space would be primarily occupied by existing San Francisco businesses that would relocate, most new workers would be already employed in San Francisco./3/ Those project workers transferring from another place of employment within the City would not generate housing demand directly attributable to the project; thus projections of housing demand attributable to the project must subtract workers already employed in San Francisco.

New employment growth due to the project would occur as new jobs were created in older buildings that would be vacated by project employees. As tenants for



the project are not known, it is impossible to predict which buildings would be vacated for the project (and which buildings would be then vacated to fill the former level of vacated space, and so on). Employee movements are dynamic; all employees new to the City attributable to the project would not be directly employed within the project. For the above reasons, it is not possible to precisely quantify new employees due to the project.

The projected regional distribution of project employees is contained in Appendix B, Table B-2, p 61. Where an employee would live is the result of individual decision-making. Such decisions are a function of location preference and housing economics. Information concerning housing preferences would be obtainable through surveys of new office workers. Preference information is complex, involving many factors such as number of bedrooms, type of heighborhood, family composition, and commute distance to work.

Assuming that the number of new employees and their preferences for housing were known, the most critical variable affecting the housing affordability analysis would be a new household's ability to pay for housing. The salary of new workers alone is insufficient to determine housing affordability; the total income of all members of a new worker's household must be known. A variety of published sources give salaries for various occupational categories, but no comprehensive data regarding the distribution of household income among office workers (or any other group of workers) exists. Citywide household income estimates based on the 1980 Census will become available during 1983, but this data source will not reflect household income of downtown office workers.

The ratio of housing expenses to income, according to the "Office/Housing Production Program (OHPP) Interim Guidelines," (January 1932) are 30% of household income for rental expenses and 38% of household income for home ownership expenses. The down payment for home ownership may be assumed to be between 10% and 20% of purchase cost; however, a household's ability to afford a down payment would depend on household assets and liabilities, and would vary widely for different households. Assumptions regarding mortgage interest rates must also be made. Considering the volatility of interest rates in



recent years, an affordability analysis based on current market interest rates might not be relevant when the project is completed and occupied.

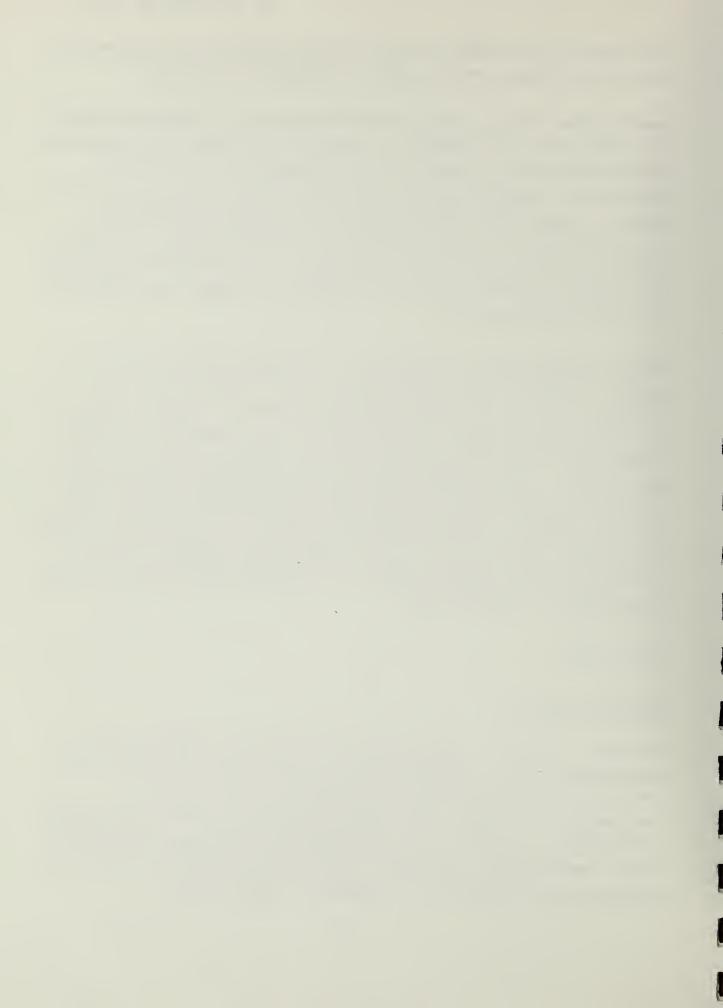
Quantification of project impacts on the housing market is not possible based on available published information. A study of the "Feasibility of Performing a Housing Affordability Analysis" by Questor Associates (June 15, 1982) concludes that household income of project employees, distribution of housing demand, and magnitude of new demand can only be accurately determined by surveying occupants of buildings comparable to an office project. The study states that without such detailed information, "it is not feasible to quantify with reasonable accuracy the housing affordability parameters associated with new office construction./4/

Based on available data, an approximation of a housing affordability analysis appears in Appendix B, Table B-3, page 62. Data in the table rely upon published sources of office worker incomes (not household income), and prices of housing (without regard to housing availability). Assumptions are made regarding ratio of housing expenses to income, mortgage interest rates, and down payments. Analysis based on these data and assumptions indicates that most project employees would not be able to afford ownership housing in San Francisco, although a significant minority, depending on the number of workers per household, would be able to do so. Most project employees, except the lowest-paid clerical employees desiring to live alone, would be able to afford rental housing in San Francisco.

FISCAL EFFECTS

### Revenues to the City

On August 5, 1982, the State Supreme Court ruled that increased payroll and gross receipts taxes adopted by the Board of Supervisors (Ordinances 113-80 and 119-80) but approved by less than two-thirds of the voters in San Francisco, are constitutional and not violative of California Constitution Article XIII A. (To reflect the increased General Fund revenues that would result from the project under this ruling, the last sentence of the first full paragraph on p. 74 of the EIR is replaced with the following:)



Tenants of the proposed building would pay either the payroll or gross receipts tax, whichever is greater./5/ Assuming that all tenants would pay a payroll tax, a 1982 average wage of about \$25,000 for downtown office workers/6/ and a payroll tax rate of 1.5 percent, payroll tax revenues from the project would be about \$375,000.

(The third and fourth paragraphs on page 75 of the EIR are updated as follows:)

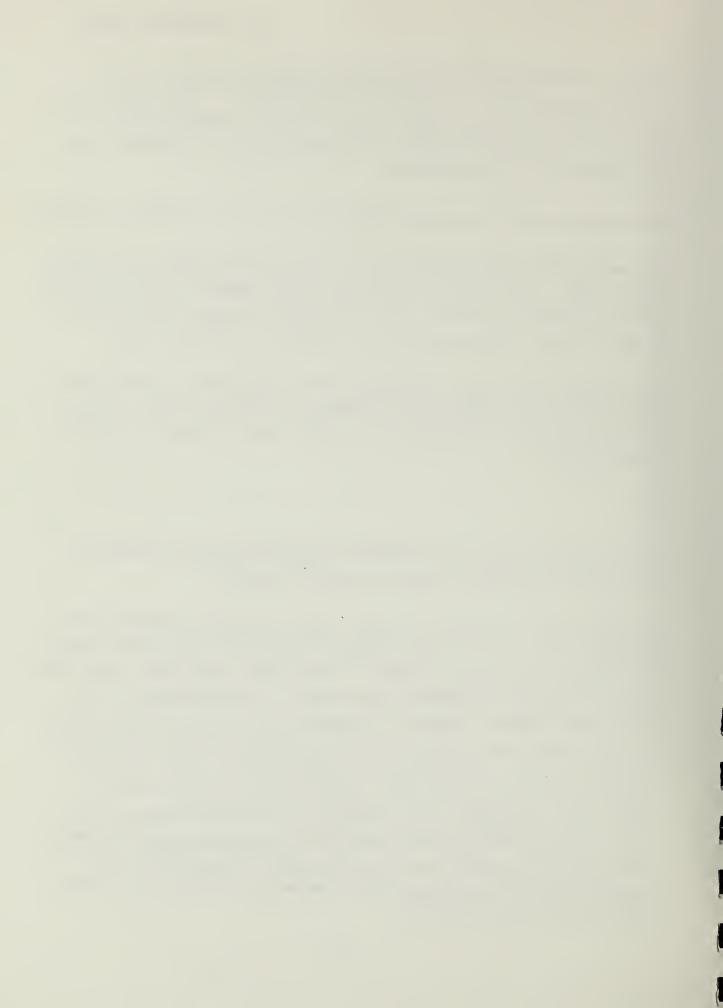
The owners of the project would pay a 0.3 percent gross receipts tax on their rental income. The estimated total annual rental income for the project would be \$7.2 million (1981 dollars). Gross receipts tax revenues therefore would be about \$21,600. There may also be an increase in the payroll taxes.

Total General Fund revenues from the non-BART sales, payroll, utility users, gross receipts, and property taxes for the City and County of San Francisco, based on the revenue calculations for the other taxes in the EIR, would be about \$952,900.

MUNI

(This discussion updates and supplements the fare and deficit information pertaining to Muni found on pages 75 and 76 of the EIR.)

The project would help pay for the Muni deficit through its contributions to the General Fund. In the 1981-82 budget, 10 percent of discretionary General Fund revenues were allocated to Muni. Based on the revised total General Fund revenues that would be generated by the project, the contribution to Muni would be about \$95,000. Based on the marginal cost figures provided by Muni, the project would more than offset the Muni deficit generated by the project through its revenue contribution to the General Fund./7/ This conclusion should be qualified because the Muni deficit-per-mile figure is based on 1980-81 data, the marginal cost is based on all rides and not peak-period riders, and the total project-related deficit is calculated using only those workers who would use Muni as their primary mode of transportation while excluding those workers who would use a combination of transportation modes, such as Muni and Southern Pacific.

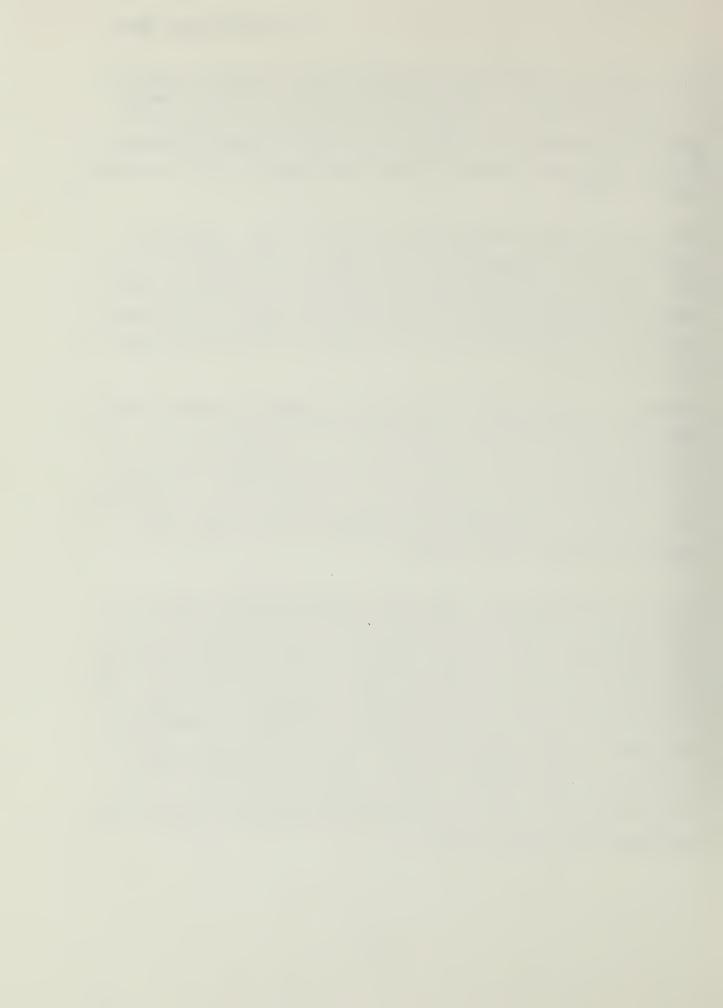


\$0.60. The increase was triggered primarily to meet the fare box revenue requirements of Assembly Bill (AB) 1107. AB 1107 allows Muni to receive a portion of the one-half cent BART sales tax revenue for operating expenses provided that at least one-third of Muni's annual operating cost is paid from fare box revenues.

The San Francisco Board of Supervisors, on April 27, 1981, approved an ordinance (224-81) to assess new downtown commercial development to support Muni. The plan called for levying a one-time fee of up to \$5.00 per gross square foot upon construction of new downtown office space. The ordinance, currently in litigation, would contribute funds for maintaining and augmenting Muni transit services.

On February 1, 1982 the Board of Supervisors approved by resolution a measure declaring its intent to form a Core Area Transit Maintenance District, determining that a portion of public transit is provided Downtown in lieu of public parking places, and to impose upon real property within the area an annual payment for transit maintenance based on gross floor area. The project site is within the proposed district and would be subject to the legal assessment provisions finally adopted.

On July 12, 1982 the Board of Supervisors decided to postpone acting on the proposed transit maintenance assessment district until January 1983. This transit assessment district may no longer be applicable since both the Mayor and Board of Supervisors have withdrawn the proposal and the Mayor may intend to substitute an increase in business taxes. The business tax increase would be in the form of a ballot measure presented to the votors; implementation would depend on voter approval (and withstanding potential legal challenges). According to a memorandum entitled "Muni's Plans to Accommodate Downtown Growth" issued by Dean Macris, Director of Planning, (August 5, 1982), Muni expects to be able to meet projected cumulative demand due to downtown office development without new City taxes.



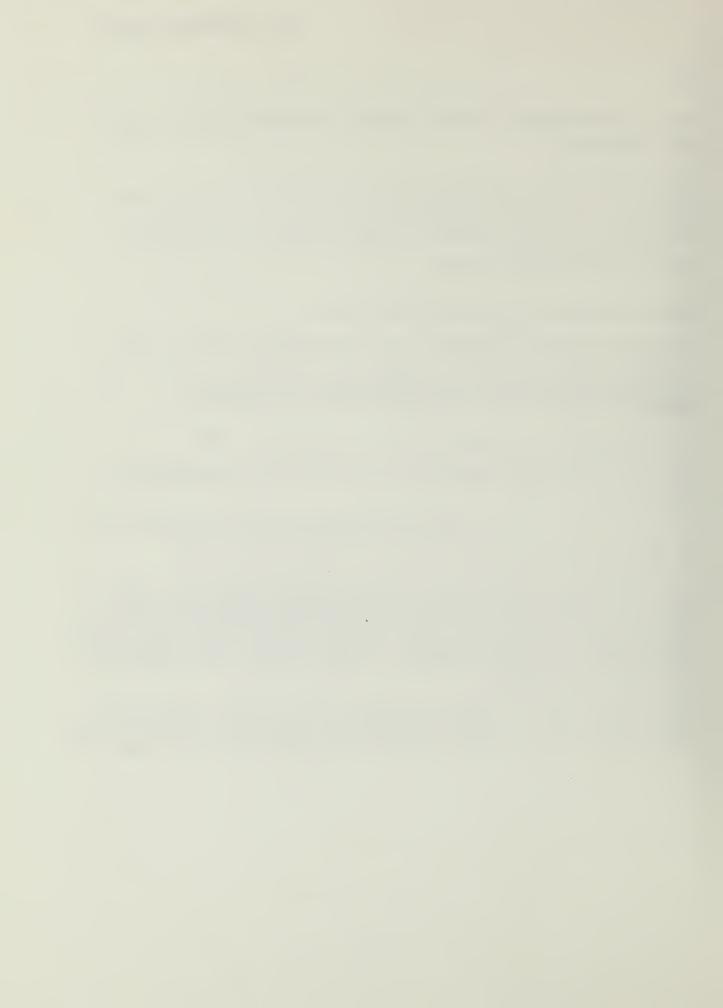
BART

(This discussion updates the fare and deficit information found on pages 76 and 77 of the EIR.)

In 1982, the average BART operating revenue was \$1.05 per ride which was 50 percent of the average operating cost per ride./8/ If the deficit per rider would be the same in 1985 as in 1982, the project would generate a deficit of about \$78,600 per year.

- NOTES Employment, Housing, and Fiscal Factors
- /1/ The San Francisco Office/Housing Production Program, August 19, 1982.
- /2/ Report of the Citizens Housing Task Force, San Francisco, July 29, 1981 and Berkeley Planning Associates, Displacement in San Francisco, September 2, 1980.
- /3/ 101 Montgomery Street EIR, EE 80.26, certified May 7, 1981.
- /4/ Ouestor Associates, Feasibility of Performing a Housing Affordability Analysis, June 15, 1982.
- /5/ Tax Collector's Office, Payroll Expense Tax and Business Tax Ordinances.
- /6/ Bank of Canton Final EIR, EE 80.296, certified July 15, 1982.
- /7/ Bruce Bernhard, Muni Chief Accountant, telephone communication, August 10, 1982. The average \$0.39 deficit per mile is based on 1980-81 Muni budget figures of an additional cost per ride (marginal cost) of \$0.71 and an average fare revenue per trip of \$0.32. Muni is unable to provide more recent data on cost and revenue figures per passenger. The deficit due to the project equals 1,070 employees x 29% who ride Muni x 468 rides per year x \$0.39 deficit per rider which equals \$56,636.

/8/ Sy Mauber, Manager of Public Information, BART, telephone communication, August 10, 1982. This information is based on BART's 1981-82 budget and does not include the effect of a fare increase that became effective in August 1982.



## B. TRANSPORTATION

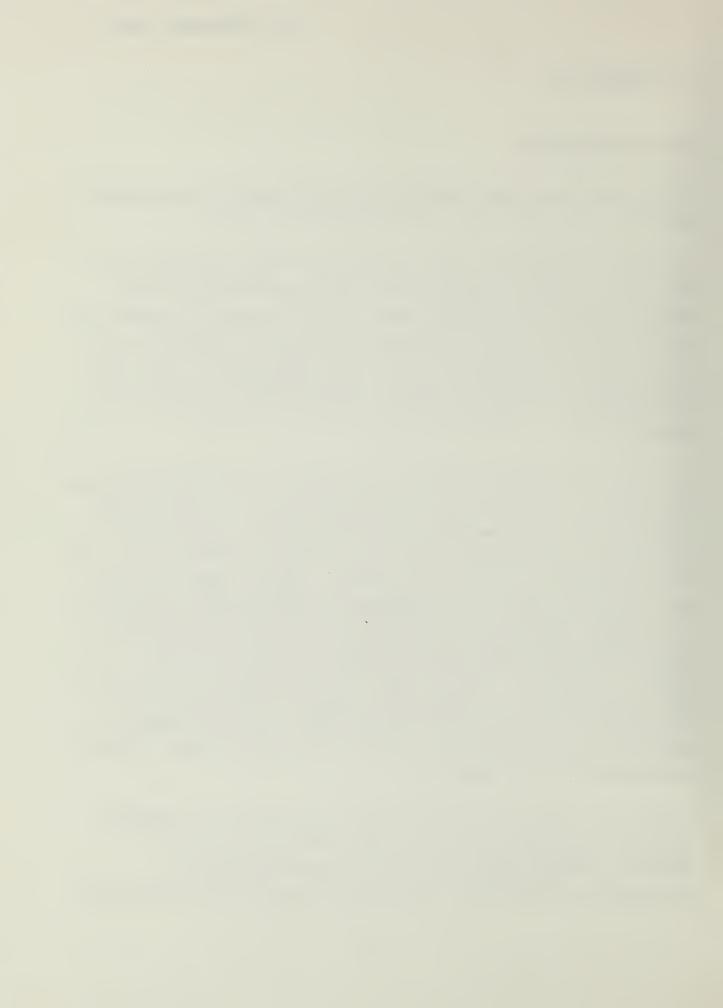
### TRAVEL DEMAND ANALYSIS

(This discussion and Tables 1 and 2 replace the discussion on travel demand and Tables 7, 8, and 9 on pages 79a, 80, and 81 of the EIR.)

An estimate of the amount of travel associated with the proposed project has been forecast through an aggregate travel demand modeling process using a generation/distribution/assignment model in which the project is treated as an attractor/generator of work and non-work related travel in proportion to the number of square feet of office and retail space (see Appendix D for further clarification). Travel is distributed to available modes using modal split data specified by the Department of City Planning (see Table D-1, p. 71, in Appendix D)./1/

The travel from the office portion of the project has been assumed to occur at the rate of 17.5 total (57% work + 43% non-work) person trip ends (pte) per 1,000 net sq. ft. of office space. (A person trip end is a one way trip.) Travel from the retail portion of the project has been assumed to occur at 100 total pte/1,000 gross sq. ft. of retail space. Based on recent survey data, 45% of the retail travel has been assumed to be internal to the project site (i.e. already counted as part of the office travel)./2/ Accordingly, the project would generate approximately 3,860 total person trip ends per weekday. The peak hour of project generation was assumed to occur during the peak period of 4:00 to 6:00 on weekdays. Twenty percent of the daily (24-hour) office travel and 10% of the daily retail travel were assumed to occur during the p.m. peak hour. The project would generate about 750 person trip ends during the p.m. peak hour.

A total of 17.4 million gross square feet of new office space is proposed, approved or under construction in the City. Tables D-1 and D-2, in Appendix D, show the projects included in the cumulative analysis. Approximately 1.3 million gross square feet of existing office space would be



replaced by the proposed development, resulting in about 16.1 million gross square feet of net new office space. This growth, and the 0.5 million gross square feet of net new retail construction, would generate approximately 48,000 person trip ends during the weekday p.m. peak hour.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit.

Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution are predicated on the assumption that housing would be available in the City. Inclusion of residential projects, therefore, would result in double counting of project generated travel.

Table 1 shows estimates of future trips generated by cumulative office development in the greater downtown area. Peak-hour travel by mode for the project and other office developments is shown in Table 2. The modal assignments have been made assuming existing travel patterns and do not attempt to predict any modal shift (see Appendix D, p. 69ff for further discussion). As the bridge and freeway system serving the City is currently near capacity during peak hours, the present population of persons traveling by single-occupant automobiles might be expected to change in the future. Much of the City-wide peak-hour increase might be expected to be accommodated by a shift from single-occupant automobile to ridesharing or public transit.

In this and other San Francisco EIRs, a <u>land-use</u> type of approach has been used to estimate employment and the resultant transportation impacts of both the proposed project and cumulative development. An alternative type of approach is to forecast travel demand based upon regional projections of future employment (<u>employment trend</u> approach)./3/ Appendix D, pages 75 to 79, contains a discussion of the differences between the two approaches.



TABLE 1: PROJECTED PEAK-HOUR PERSON-TRIPS FOR OFFICE BUILDINGS PROPOSED, APPROVED AND UNDER CONSTRUCTION IN THE GREATER DOWNTOWN AREA AS OF AUGUST 6, 1982

Buildings* Off	fice (sq. ft.)**	Retail (sq. ft.)** P	eak-Hour Person-Trips
Under construction	7,427,350	136,050	21,550
Approved	4,602,600	146,310	13,690
Under Formal Review	3,801,570	249,150	12,010
135 Main Street	260,000	4,000	750
TOTAL	16,091,520	535,510	48,000

<sup>\*</sup> All office buildings identified as of August 6, 1982 (see Table C-1 and C-2 Appendix C, pages 65ff. The 135 Main St. project has been separated from the approved project totals shown in Table C-2.

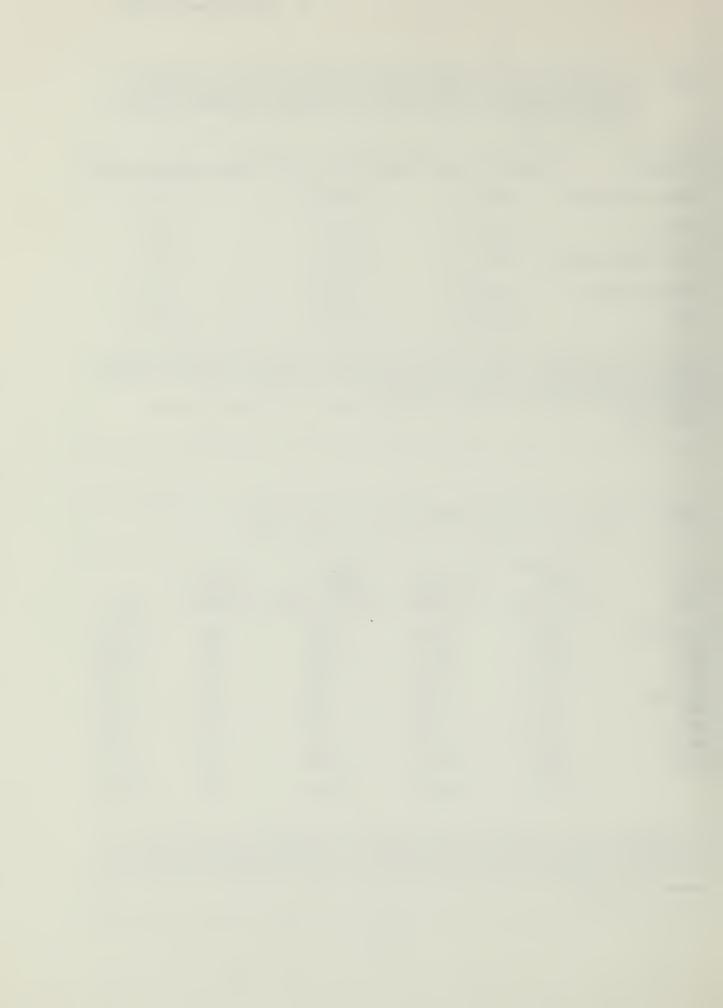
\*\* Net new construction = Total new construction minus existing space

TABLE 2: PROJECTED PEAK-HOUR PERSON-TRIPS BY TRAVEL MODE\*

Modal Type	Projects** Under Construction	Approved Projects**	Projects Under Formal Review**	135 Main Project	Total
Automobile	6,980	4,360	3,650	240	15,230
Muni	5,480	3,430	2,900	<b>19</b> 0	12,000
BART	3,700	2,310	1,950	130	8,090
A/C	1,720	1,060	880	60	3,720
SamTrans	250	160	130	10	550
SPRR	940	5 <b>9</b> 0	<b>49</b> 0	<b>3</b> 0	2,050
GGT	820	510	430	30	<b>1,79</b> 0
Ferry	180	100	90	10	380
Other	1,480	1,170	1,490	_50	4,190
	21,550	13,690	12,010	750	48,000

<sup>\*</sup> Projections based upon distribution shown in Table D-1, Appendix D, p. 68. \*\* Individual projects are listed in Table C-1, Appendix C, p. 64. The 135 Main St. project has been separated here from the approved project totals shown in Table C-2.

demolished.



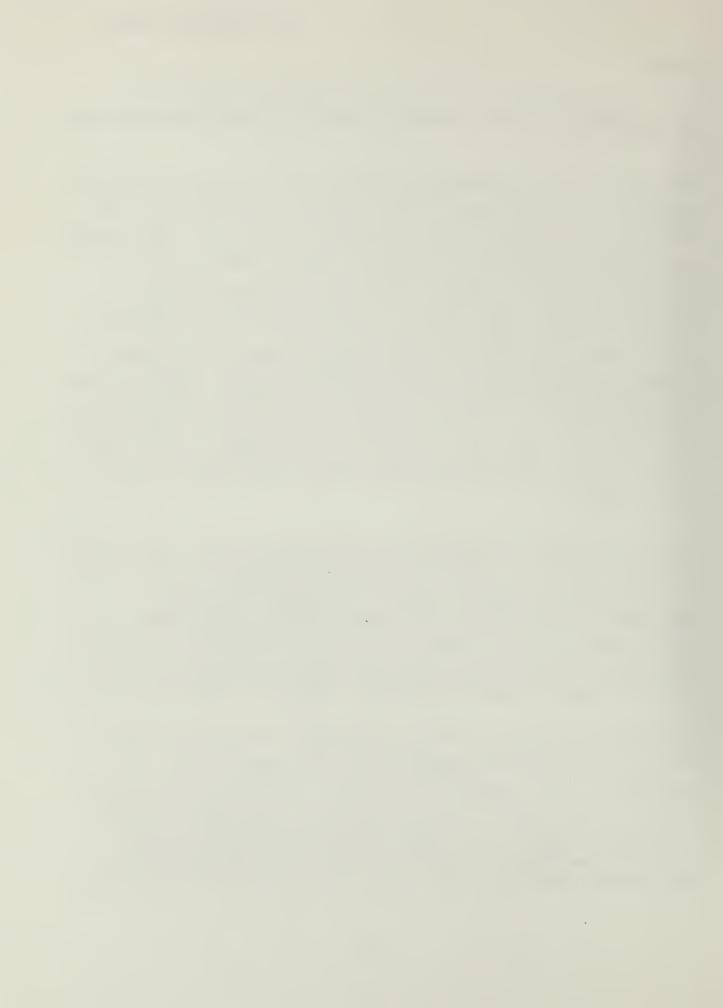
#### TRANSIT

(This discussion and Table 3 replace the discussion on transit on pages 81 and 82 of the EIR.)

The transit analysis (conducted using Department of City Planning Guidelines) analyzed cumulative and project ridership based on existing capacity. As a "worst case", this analysis assumes no expansion in the transit system and the results are not dependent on increased City, State, or Federal funding. If existing City, State, or Federal funding were to decrease, operating conditions on the Muni and other carriers would be expected to deteriorate. Conversely, if City, State, and Federal funding were to increase over existing levels, operating conditions would be expected to improve. The estimated ridership, for the 16.1 million gross square feet of net new cumulative office development and for the project, and load factors based upon existing capacity are shown in Table 3. As all of the transit agencies have five-year plans for improving service, load factors based upon capacity proposed to occur in the current five-year plan cycle (1982-1987) for each transit agency are also shown in Table 3.

The existing loads plus the project trips and cumulative trips on the 37 Muni lines with stops within 2,000 feet of the site are expected to result in about 34,300 outbound p.m. peak hour trips./4/ The project would generate approximately 190 p.m. peak-hour Muni trips. Project-generated riders during the p.m. peak hour would be about 1.6% of the demand from the 16.1 million gross square feet of net new cumulative development (see Table 2, p.19). Line by line Muni loading projections are shown in Appendix D, Table D-2, p. 74.

The addition of the ridership from the projected 16.1 million gross square feet of net new cumulative development would cause demand on most of the affected Muni lines to exceed existing capacity. This would also be the case for BART transbay, Southern Pacific and SamTrans. As the cumulative demand increases, the length of time of peak loadings would increase, spreading peak-of-the-peak conditions over time. As some lines only operate during heavy demand periods (for example, express service for ont to two hours during



peak periods), there may not be additional capacity available to allow spreading over time without adding more runs. (Additional runs may not require increases in vehicle fleet size as the additional runs would be extending the peak period level of service over a longer period of time. Additional runs would cause increases in operating and maintenance costs.)

Assuming that existing funding continues and proposed expansion occurs, the future load factors on the transit agencies would be as shown in Table 3. BART is projecting a peak hour capacity of 16,500 seats transbay (eastbound) and 11,000 seats westbay (westbound). Recommended maximum capacity would be 24,750 and 16,500 respectively. Average loadings, including ridership from the projected 16.1 million gross square feet of net new cumulative development, would not be over capacity with the anticipated five-year plan capacity. AC Transit does not have any increases proposed for its transbay service and would therefore be operating at 99% of its recommended maximum capacity with the cumulative demand. SamTrans is proposing to have a capacity of between 4,800 and 5,000 seats per hour on its San Francisco routes. Recommended maximum capacity would be 6,250 riders. Average future loadings on SamTrans would be under seated capacity when the anticipated capacity becomes available. Southern Pacific/CalTrans does not have any proposals to increase seated capacity, but station improvements, including additional parking, are proposed. Southern Pacific would therefore operate in excess of its recommended maximum capacity with the cumulative demand. Transit is proposing to increase peak period (6-10 a.m.) motor coach capacity by 25% over existing levels and to increase ferry service by addition of another Larkspur Ferry (an increase of about 70% over existing service). Average future loadings (including the cumulative demand) on Golden Gate Transit would not exceed capacity when the proposed additions become available./5/



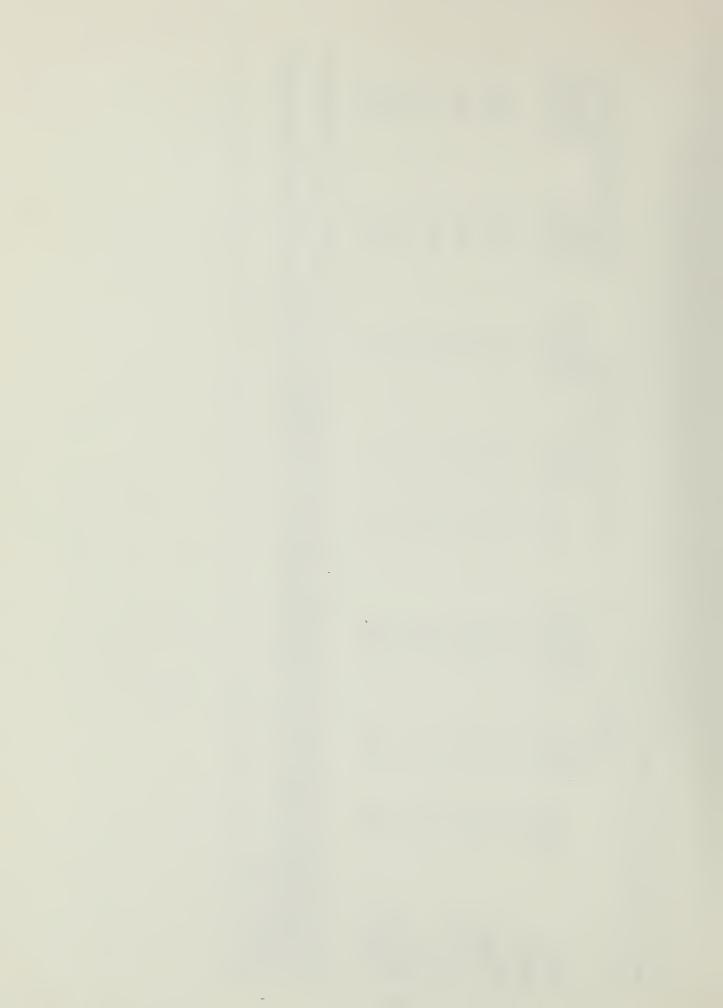
TABLE 3: AFTERNOON PEAK HOUR OUTBOUND TRANSIT RIDERSHIP

		RIDERSHIP		LOAD FACT	LOAD FACTOR (Existing Capacity)*	oacity)*	LOAD FACTOR (Prop	OAD FACTOR (Proposed Capacity)**
Agency	Existing	Existing plus Cumulative	Existing plus Cumulative plus Project	Fxisting	Existing plus plus Cumulative	Existing plus Cumulative plus Project	Existing plus Cumulative	Existing plus Cumulative plus Project
Muni ***	23,240	34,070	34,265	0.91	1.33	1.34	1.12	1.14
BART Transbay Westbay	13,600 6,445	18,900	18,920 9,220	0.90	1.25 0.88	1.25	0.76 0.56	0.76 0.56
A-C Transit	095,6	13,260	13,280	0.72	66*0	66*0	66*0	66.0
SamTrans	1,700	2,250	2,250	0.78	1.03	1.03	0.36	0.36
SPRR Golden Gato	5,180	7,220	7,230	0.78	1.10	1.10	01.1	01.10
Motor Coach Ferry	4,510 800	6,290 1,180	6,300	0.39	0.92 0.57	0.92 0.57	0.73	0.73

\*Load factor based upon existing (recommended) maximum capacity. A load factor of 1.00 is equivalent to 100% of recommended seated and standing capacity being used. Recommended maximum capacity is less than "crush" loadings that occur occasionally.

\*\* Load factor based upon proposed capacity as specified by each agency's Five-Vear Plan (see Appendix D, p. 73).
\*\*\* 1982 Muni ridership is approximate based on a compilation of Muni ridership by the Department of City Planning and Office of Environmental Review as supplemented by ESA.

SOURCE: Environmental Science Associates, Inc.



#### TRAFFIC

(This discussion and Table 4 replace the last paragraph on page 88 of the EIR and Table 10 on page 89. Table 4 is based on current (1982) counts which are lower than those used in Table 10 of the EIR.)

Cumulative vehicular and pedestrian traffic from 16.1 million gross square feet of net new office development would degrade service levels at all of the intersections shown in Table 4. After cumulative development, assuming existing traffic patterns and existing modal share relationships remain constant, the intersections at Mission-Main and Mission-Beale would be at service level F during the p.m. peak. This would occur with or without the 135 Main Street project. Operations at the Mission-Spear and Main-Howard intersections would not be reduced below Level of Service C by addition of the cumulative development or project traffic.

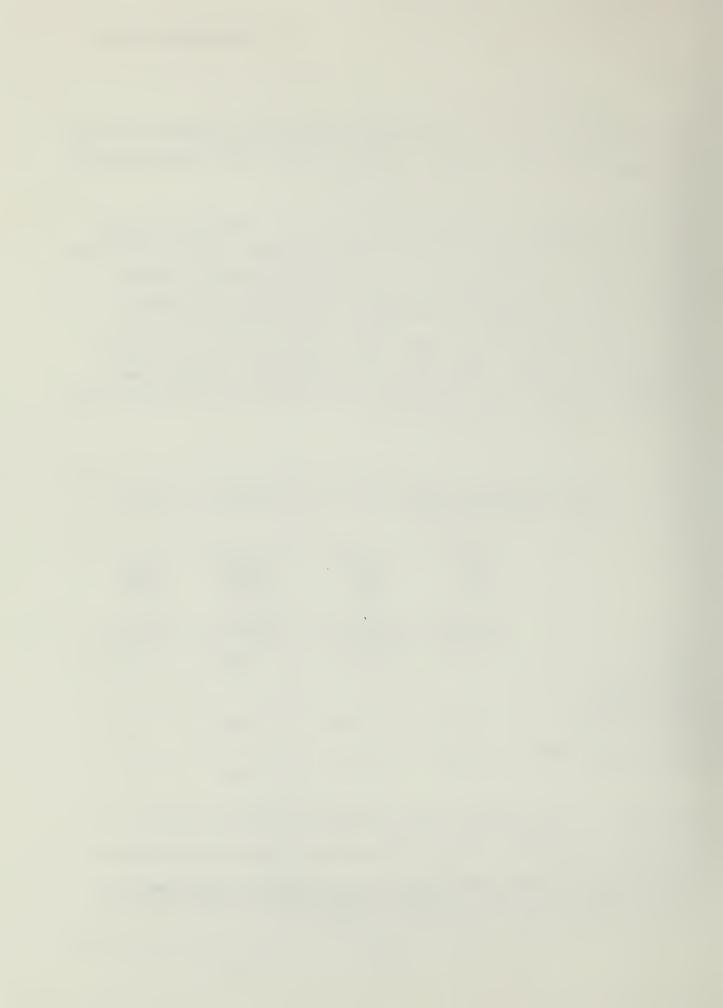
TABLE 4: LEVELS OF SERVICE AT INTERSECTIONS IN THE VICINITY OF 135 MAIN STREET DURING PEAK-HOURS

	MISSION- BEALE (PM)	MISSION- MAIN (AM)	MISSION- SPEAR (PM)	MAIN- HOWARD (PM)
	LOS* V/C**	LOS V/C	LOS V/C	LOS V/C
Existing	D 0.89	D 0.35	A 0.48	C 0.74
With cumulative development*** Without 135 Main	F 1.56	F 1.29	B 0.68	C 0.76
Cumulative development With 135 Main	F 1.60	F 1.32	B 0.68	C 0.77

<sup>\*</sup>LOS stands for Level of Service which is defined in Table D-3, Appendix D, page 75.

<sup>\*\*</sup>V/C stands for volume to capacity ratio, the use of which is explained in Appendix D, p. 75.

<sup>\*\*\*</sup>The 16.1 million gross square feet of net new cumulative development is listed in Table C-1, p. 64. The 135 Main Street project has been separated from the approved project totals shown in Table C-2.



PARKING

(This discussion replaces the narrative on parking on pages 89 and 90 of the EIR.)

The daily project-generated parking demand is estimated to be 275 parking spaces. This demand calculation was based on the number of work and non-work automobile trips. The average percentage of non-work trips for multi-tenanted buildings is estimated to be 43%, as assumed in the travel demand analysis. The average length of stay for non-work trips is estimated to be two hours.

To estimate the long-term parking demand by project workers, all of the work related automobile trips were assumed to generate demand for one parking space per trip, or 250 spaces for the project each day. This would be worst case because some workers would use their autos during the day thus allowing multiple use of some parking spaces. The non-work or short-term parking demand was calculated by dividing the non-work auto trips by a turnover factor based upon the average length of stay. (Turnover was calculated by dividing a 9-hour working day, 8:00 a.m. - 5:00 p.m., by the average length of stay of two hours to give a turnover factor of 4.5.) Thus the average short-term (non-work) parking demand was calculated to be 25 spaces for the project.

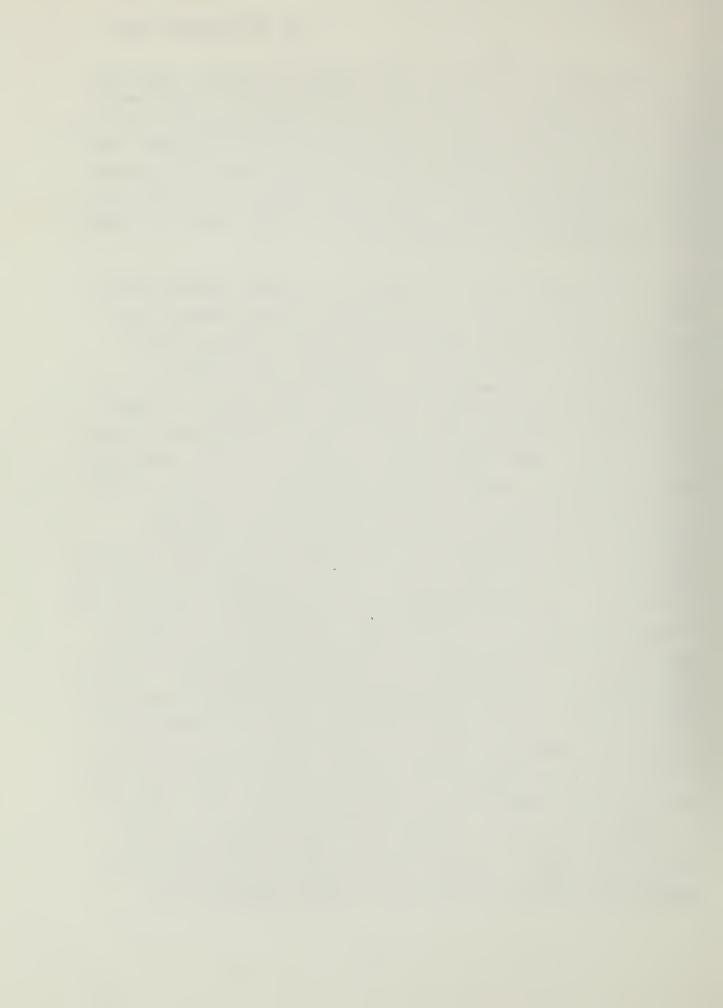
The project proposes to provide 22 off-street spaces. Access to the 2? off-street parking spaces in the building would be at the south end of the building on Main Street via a two-way ramp 15.5 feet wide on a 13 percent grade. The small number of spaces to be provided, in comparison with demand, is consistent with the overall policy of the Transportation Element of the Master Plan of minimizing automobile use in the core area, and the legislative policy that no parking is required by the City Planning Code (Section 161(c)) for office uses in the C-3-0 district. A six-bicycle rack would be provided in the parking area and one wide parking space adjacent to the elevators would be provided for exclusive use by handicapped individuals.

The project would have an average 25 space deficit for short-term parking. Within the near vicinity (about 1,000 feet) of the project site are approximately 2,530 commercially available off-street parking spaces. About



470 of these spaces are located on sites of projects approved or under formal review. Average daytime occupancy in the unaffected spaces is approximately 96% with about 75 spaces open at any one time. Cumulative short-term parking demand from buildings proposed and under construction near the project (that would compete for the parking within 1,000 feet of the project) is projected to be 85 spaces. The net cumulative short-term parking deficit in the area within 1,000 feet of the project would be about 35 spaces assuming the removal of off-street parking by proposed buildings.

Using the methodology described in Appendix D, pages 69ff, long-term parking demand for the 16.1 million gross square feet of net new cumulative office development in the greater downtown area has been calculated to be about 15,600 spaces (including the project). The project would represent 1.6 percent of the total demand. As long-term parking demand is typically work (employee) related and is more likely to be influenced by cost rather than by location (see Appendix D, p. 69ff), long-term parking demand has been assumed to be distributed over the greater downtown and South of Market areas rather than being concentrated near the proposed project location. A recent survey by the Department of City Planning shows that there are about 37,000 off-street parking spaces in the C-3 district and an additional 6,500 spaces in the area bounded by The Embarcadero, Folsom, Eighth and Bryant Streets./6/ Based upon average occupancy, about 4,100 spaces are available on a daily basis. The cumulative demand for the whole downtown area would create a theoretical net deficit of 11,500 spaces. Parking demand has been based upon existing travel patterns and is not dependent upon the availability of parking spaces or by the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into downtown is essentially fixed at existing levels as major construction would be required to add new capacity. Therefore, the net deficit of 11,500 spaces does not mean that 11,500 autos would be driving on City streets in search of parking. the travel demand represented by the parking deficit would most likely shift to ridesharing or transit. Increased ridesharing would not only reduce parking demand but would also reduce traffic impacts from the worst-case impacts shown in Table 4, page 25. Increased transit use would add to the demands on the regional and local transit systems, particularly Muni.

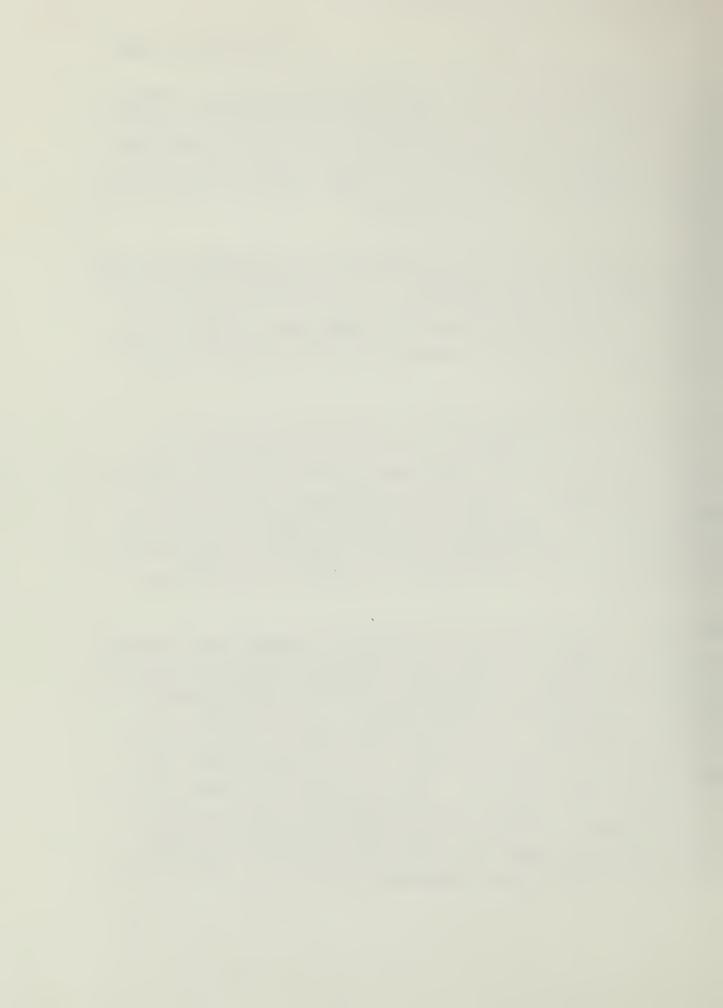


The deficit may be less than this estimate as the survey did not inventory parking in the Civic Center area, the areas west of Eighth Street, south of Bryant Street or north of Washington Street. The survey did indicate that inside the study area about 6,000 parking spaces have been added since 1967 and approximately 1,400 are proposed to be added (exclusive of 4,845 parking spaces to be provided in Yerba Buena Center).

Current City policy, as stated in the <u>Revisions to the Transportation Element</u> of the <u>Master Plan Regarding Parking</u>, is to "Discourage the addition of new long-term parking spaces in and around downtown, limit the amount of new spaces to that which cannot reasonably be accommodated by transit and locate long-term parking facilities in areas peripheral to the downtown commercial district."/7/

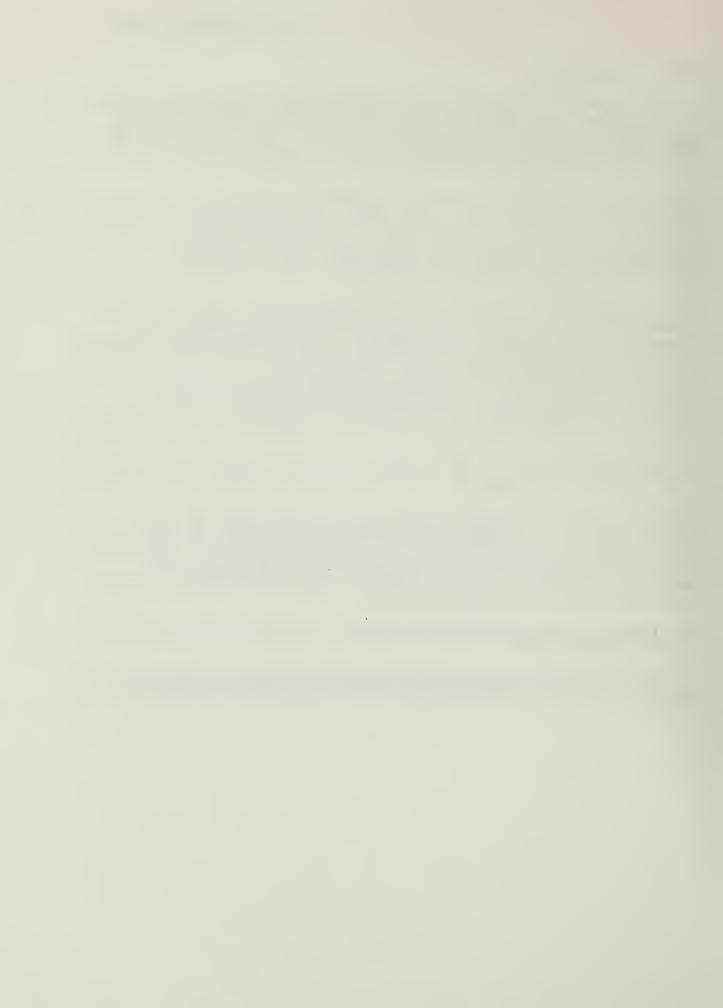
The Master Plan Parking Policy has also stated the need to "encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all-day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low."/7/ Accordingly, approximately 14,000 existing off-street spaces in the C-3-0 planning district could be converted to short-term-only parking if the City enacted legislation to establish public control over private garages.

Imbalances in long-term parking demand and potential supply, given projected cumulative development and demand, would be expected to encourage the use of car pools and van pools, or the creation of satellite (intercept) parking facilities in outlying non-residential areas or in outlying cities, with shuttle or expanded Muni service to the downtown area, or increased use of transit directly for commuters from San Francisco or from suburban centers (East Bay, North Bay, Peninsula). Peninsula residents, for example, could find Southern Pacific commuter trains more attractive if they could get no closer to downtown by car than the train terminal at Fourth and Townsend Streets. All transit options would add to the demands on the regional and local transit systems, however, particularly Muni.



## NOTES - Transportation

- /1/ The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the <u>Guidelines for Environmental Impact Review</u>, <u>Transportation Impacts Department of City Planning</u>, October 1980, and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.
- /2/ Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.
- /3/ The Department of City Planning, Office Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.
- /4/ The 37 affected Muni lines are the 1, 1x, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 14GL, 14X, 15, 17X, 21, 27, 31, 31X, 38, 38L, 38AX, 38BX, 41, 42, 45, 61, J, K, L, M, N, 71, 72, and 80X.
- /5/ BART projections from Marty Birkenthal of BART on August 18, 1982; SamTrans projections from Gregory Kipp of SamTrans on August 18, 1982; A-C Transit proposals from Ted Reynolds of AC Transit on August 18, 1982; Golden Gate Transit proposals from Alan Zahradnik of Golden Gate Transit on August 19, 1982, Southern Pacific proposal from Jim Strong, Design Engineer with Southern Pacific, on August 26, 1982.
- /6/ Inventory of Off-Street Parking Spaces, San Francisco Department of City Planning, May 24, 1982.
- /7/ Revisions to the Transportation Element of the Master Plan Regarding Parking, Resolution 7647, San Francisco Planning Commission, January 20, 1977.



# C. AIR QUALITY

(This discussion replaces Section IV G and Tables 13 and 14, pages 99 through 102, of the EIR. Table E-1 page 81, updates Table 3 on page 45 of the EIR.)

At the Beale, Main, and Spear Street intersections with Mission Street, cumulative development and project impacts on sidewalk carbon monoxide (CO) levels were calculated for 1982 and 1987, using peak-hour traffic volumes according to methods recommended by the BAAQMD./1/ The results of these calculations are shown in Table 5. Project-generated traffic would contribute less than a 0.2 parts-per-million increase to the eight-hour and one-hour carbon monoxide concentrations in the project vicinity and would cause no violations of standards.

As indicated in Table 5, no violations of standards would be expected to occur in 1987, with all planned development in place. Concentrations in 1987, with the addition of cumulative and project emissions, would be approximately the same or in most cases less than in 1982 because Federal and State-mandated vehicular emission control measures already in effect would reduce the emissions from individual vehicles,/2/ and offset emission increases caused by increases in traffic volumes. CO concentrations, as measured at the BAAQMD monitoring station at 900 23rd Street, have declined steadily since 1979, reflecting the drop in total emissions of CO that is expected to continue through the year 2000./3/

Project-related emissions would arise from project-generated transportation and from building operations (space and water heating). Emissions of carbon monoxide, hydrocarbons, and oxidants from building operations would be less than one percent of annual project-related emissons.

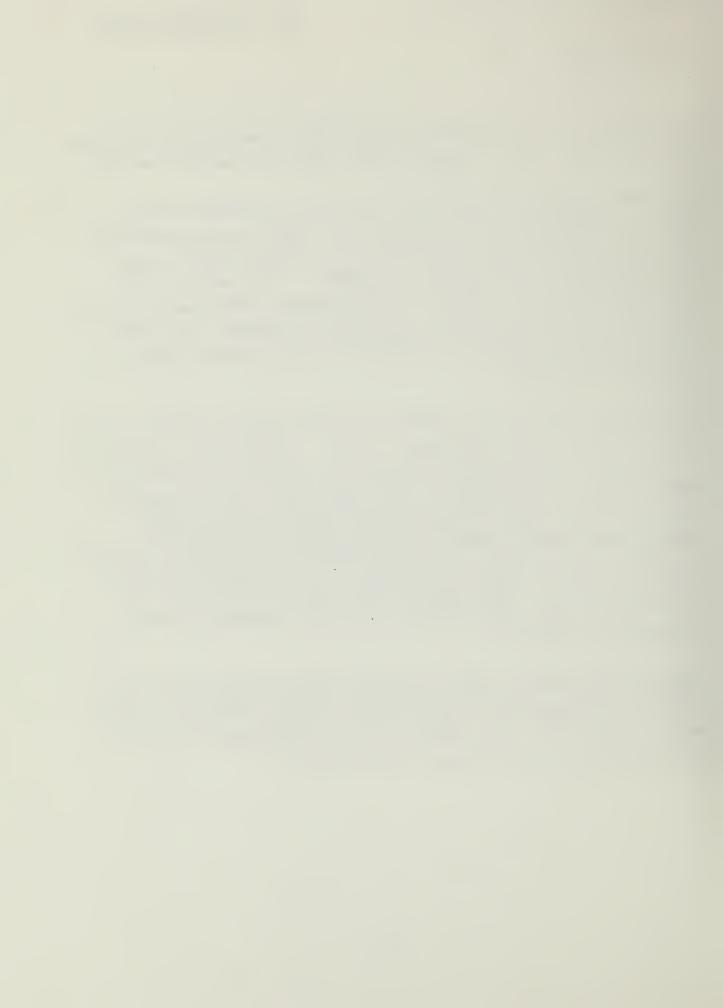


TABLE 5: PROJECTED WORST-CASE CUMULATIVE SIDEWALK CARBON MONOXIDE CONCENTRATIONS AT MAJOR INTERSECTIONS NEAR THE PROJECT IN 1987\* IN PARTS PER MILLION (P.P.M.)

	Existing 1982	With Cumulative Projects 1987**	With 135 Main 1987***
1-Hour Concentration**			
Ambient level	10.3	8.4	8.4
Beale Street (south of Mission)	14.8	14.9	15.0
Main Street (south of Mission)	16.0	16.2	16.4
Mission Street (west of Spear)	15.6	13.8	13.8
8-Hour Concentration**			
Ambient level	6.5	5.2	5.2
Beale Street (south of Mission)	7.7	6.7	6.7
Main Street (west of Spear)	8.3	7.1	7.2

<sup>\*</sup>Concentrations at the sidewalk adjacent to the heaviest traveled roadway segment were calculated at each intersection according to the BAAQMD Guidelines for Air Quality Impact Analysis at Projects, 1975, updated with 1981 ARB EMFAC6 emission factors. These methods assume worst-case meteorology and roadway configuration. The ambient or background level in 1982 was caluclated as the 3-year average of the second highest annual concentrations. for 1987, the background level was the 1982 value adjusted according to the regional emission projected for those years by the 1982 Bay Air Quality Plan. \*\*The 1-hour and 8-hour standards for carbon monoxide are 35 ppm and 9 ppm, respectively.

\*\*\*The project is scheduled for completion in 1984 but calculations were done for 1987 to take into account completion of all projects currently proposed, planned or under constructon (see Table C-1, page 64).

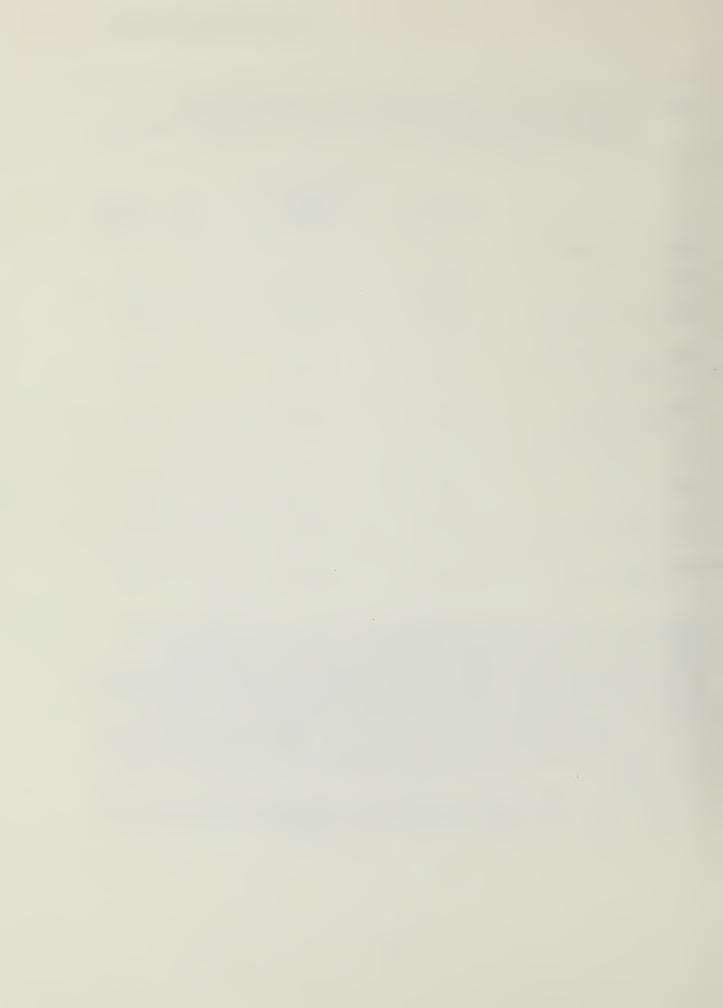


Table 6 shows annual project-related emissions, development-related emisions, and regional emissions of carbon monoxide, hydrocarbons and nitrogen oxides in 1987. Project-related emissions would add less than 1/100 of a percent to the projected emissions in the San Francisco Bay Area Air Basin in 1987. Cumulative emissions from this project and other development in the area would make up less than one percent of the regional total in 1987. Although relatively small, cumulative emissions would slightly impede attainment of air quality standards.

The project and other developments in the Downtown area would not impede the control strategies of the Bay Area Air Quality Plan./2/

NOTE - Air Quality

/1/ Bay Area Air Quality Management District, <u>Guidelines for Air Quality</u> Impact Analysis of Projects, 1975

/2/ Memorandum, BAAQMD, Vehicle Emission Factor Update, July 15, 1981.

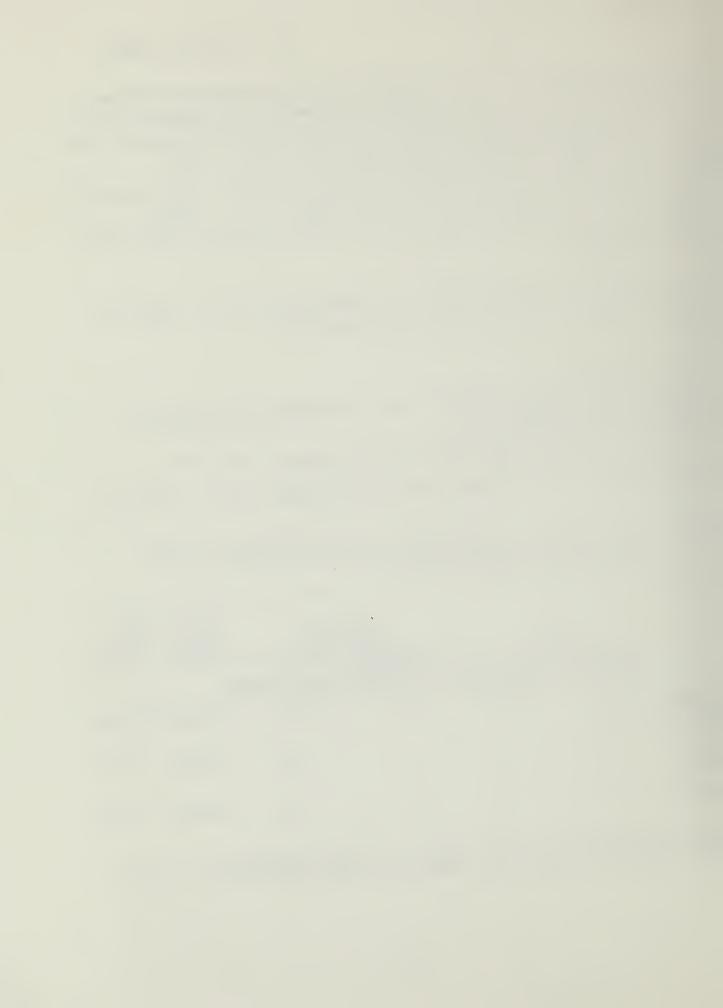
/3/ABAG, BAAOMD and MTC, 1982 Bay Area Air Quality Plan, July 1982, page 59.

TABLE 6: ANNUAL PROJECT- AND CUMULATIVE DEVELOPMENT-GENERATED POLLUTANT EMISSIONS (TONS PER YEAR) IN 1987

	Proj Building Operation	ject Transportation	Building	ative opment* Transportatio	1982 Regional Total**	1987 Regional Total**
Carbon Monoxide	0.012	65.6	2.9	4,124	1,050,000	854,000
Hydro- carbon	0.005	5.8	1.2	363	224,000	183,000
Nitrogen	0.072	8.2	17.4	517	218,000	198,000

<sup>\*</sup>Includes all buildings listed in Table C-1 at full occupancy.

<sup>\*\*1982</sup> Bay Area Air Quality Plan, prepared by ABAG, BAAQMD and MTC. July 1982.



## D. ENERGY

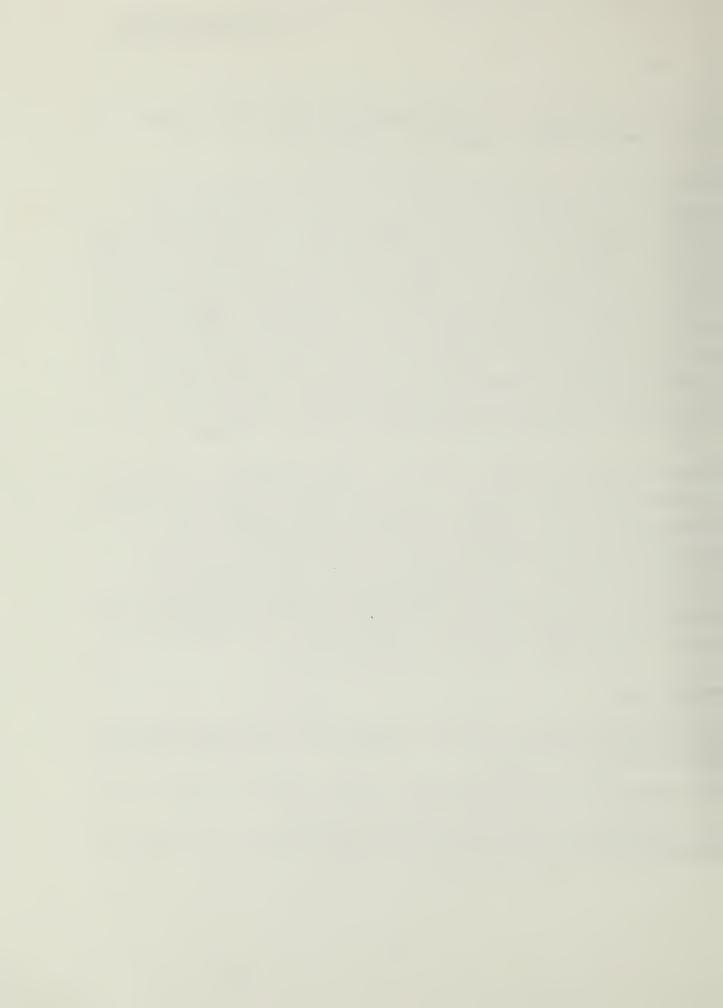
(This discussion replaces the second paragraph on page 107 of the EIR. Table 7 replaces Table 15, page 108 of the EIR.)

The project and other office development under review, approved, or under construction in downtown San Francisco ( see Table C-1, page 64) would increase electricity consumption by about 260 million killowatt-hours per year and would increase natural gas consumption by about 403 million cubic feet per year for building operations. Transportation associated with this cumulative office development would increase diesel fuel consumption by about 1.3 million gallons per year, gasoline consumption by about 8.8 million gallons per year, and electricity consumption by about 52 million killowatt-hours per year (see Table 7). The total increase in energy demand would be about five trillion Btu/1/ annually, equivalent to about 880,000 barrels of oil per year. The project would cause about one percent of this cumulative increase.

Cumulative office development under review, approved, and under construction in downtown San Francisco, which is included in PG&E's projections /2/, would increase PG&E's current systemwide electrical load of 79,579 billion watt-hours per year by about 0.3%. PG&E is planning for an 11% increase in this load by 1990; this is an average increase of about 1.2% per year./3/ Additionally, PG&E is projecting reserve margins (excess capacity) of 20 to 30 percent over the next ten years./2/ Thus, the cumulative office development would not require PG&E to alter its short-range plans.

#### NOTES - Energy

- /1/ The British thermal unit (Btu) is a unit of heat energy equivalent to the quantity of heat required to raise the temperature of one pound of water one degree Farenheit at sea level.
- /2/ Jim Davidson, Senior Civil Engineer, Generation Planning, Pacific Gas and Electric Company; telephone communication, May 21, 1982.
- /3/ Pacific Gas and Electric Company, March, 1982, Forecast of the Demand for Electricity Within the PG&E Service Area, 1982-2002.

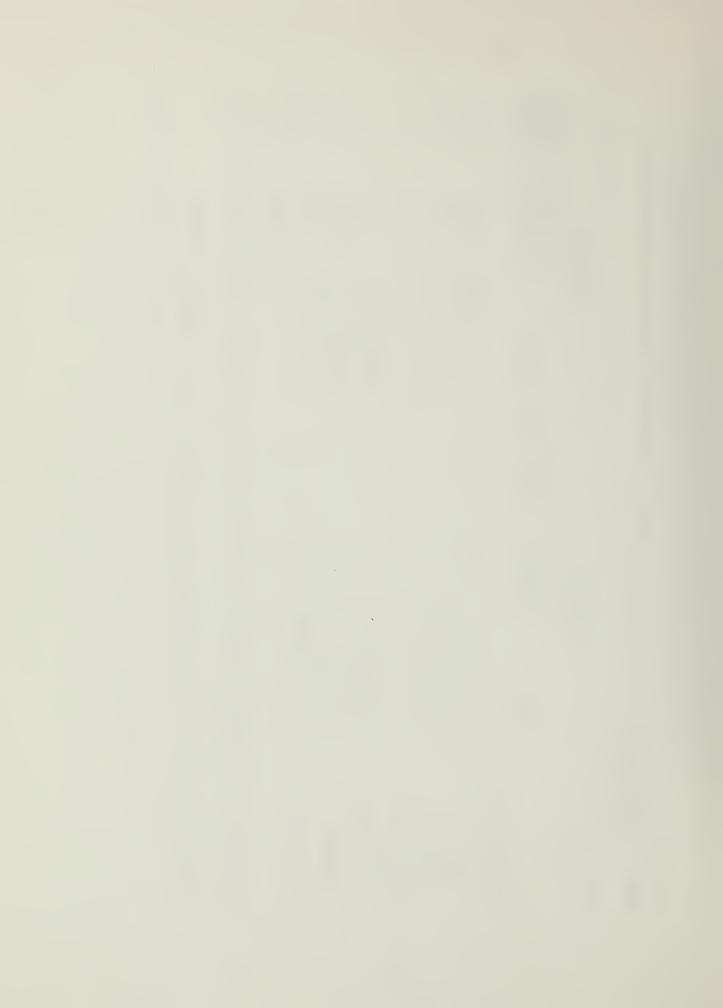


PROJECTED ANNUAL USE OF NONRENEWABLE ENERGY RESOURCES BY 135 MAIN STREET AND CUMULATIVE DEVELOPMENT TABLE 7:

	PR	PROJECT		CUMULATIVE	
	Amount	Billion Btu at Source*	Percent of Project Total	Billion Btu Amount at Source	Percent of Total
Building Operation					
Electricity	3.3 million kwh	34	54	260 million kwh 2,660	53
Natural Gas	1.2 million cu. ft	ft 1.4	2	403 million cu. ft 440	6
Transportation					
Diesel Fuel	31,000 gal.	2	œ	1,300,000 gal. 210	4
Gasoline	16,000 gal.	2.3	4	8,800,000 gal. 1,200	24
Electricity	2.0 million kwh	<u>20</u>	32	52 million kwh 530	10
		63	100	5,040	100

<sup>\*</sup>The data in this table are rounded to two significant digits; therefore, the Btu columns do not add exactly to the totals shown.

\*\*Cumulative figures are based on data derived from Tables C-1 and C-2, pages 65 and 68.



* •	TITTON TO	E/ISOITES II	 	 1 7.0 7 5 01	, -
	PROJECT				
	11100201				

V MITIGATION MEASURES WHICH WOULD MINIMIZE THE POTENTIAL IMPACTS OF THE

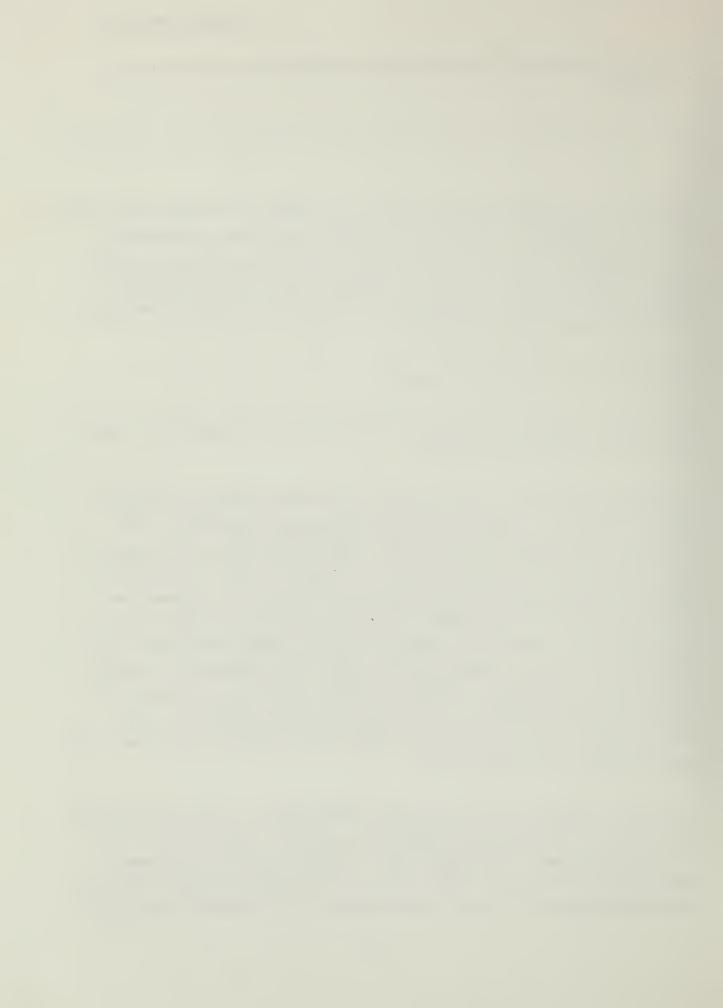
The analysis of mitigation measures set forth on pages 114 through 121a of the EIR is not changed by the additional information and analysis contained in this Supplemental EIR. To the extent that the mitigation measures mitigate project impacts, they also serve, in combination with mitigation measures imposed on other projects contributing to the cumulative impacts identified, to mitigate those cumulative impacts.

TRANSPORTATION, CIRCULATION AND PARKING

(The following measures pertaining to Mission Street intersections are added at the end of page 117 of the EIR.)

The projected peak-hour level of service at the Mission-Beale intersection would be reduced to F under the cumulative development conditions. The San Francisco Department of Public Works (DPW) could mitigate this effect by prohibiting left turns from Mission St. onto Beale St. and by restriping the Beale St. approach to the intersection from four lanes to five lanes (and removing parking). These changes would change the Level of Service from F to E during the p.m. peak-hour (a volume to capacity change from 1.60 to 1.00). Implementation of such a measure would be under the jurisdiction of the DPW and would be considered as a possible mitigation measure at such time as the projected conditions develop. These changes may not be desirable as the traffic currently turning left would redistribute to other intersections, thus adding travel on the street system.

The critical approach to the Mission-Main intersection is the freeway off-ramp which currently has two lanes northbound onto Main St. and a left turn lane. The volume projected to use these lanes, including cumulative development, would decrease the level of service to F, as the projected volume would exceed the carrying capacity of the freeway off-ramp as it is currently constructed.



### V. Mitigation Measures

An additional left turn lane would need to be added to increase the capacity of the off-ramp. More green time could be allocated to the appropriate phase of the traffic signal by prohibiting left turns from Mission St. onto Main St. This measure would change the Level of Service from F to E for the a.m. peak-hour (a volume to capacity change from 1.32 to 0.94). Prohibition of left turns on Mission St. would be under the jurisdiction of the DPW. Lane additions on the off-ramp would be under the jurisdiction of CalTrans.



PROJECT IS	IMPLEMENTED

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED

TRANSPORTATION (CIRCULATION AND PARKING)

(This paragraph updates and replaces the first sentence of the paragraph on this subject on pages 123 and 124 of the EIR.)

The project would add directly about 190 person-trips on the Muni system during the p.m. peak hour, which would be about 1.6 percent of the demand resulting from the 16.1 million gross square feet of net new cumulative development (described in Tables C-1 and C-2). It would add 270 trips to regional transit modes, compared with a cumulative addition of 16,580 trips.



VII.	ALTERNAT	YIVES	TO	THE	PROPOSED	<b>PROJECT</b>
------	----------	-------	----	-----	----------	----------------

# A. NO PROJECT

(This description updates and replaces the description of the No Project Alternative on page 125 of the EIR.)

This alternative would entail no physical change to the project site as it now exists. It would continue to be a vacant parcel enclosed by a security fence. The parcel would not provide a link needed to effectuate an interior block walkway across the site. The impacts disclosed in the EIR would not occur, and the jobs and taxes which would be generated by the project would not occur.



#### VIII. EIR AUTHORS AND CONSULTANTS; ORGANIZATIONS AND PERSONS CONSULTED

# EIR AUTHORS

San Francisco Department of City Planning 450 McAllister Street San Francisco, CA 94102

Environmental Review Officer: Alec Bash

Assistant Environmental Review Officer: Barbara Sahm

Project Coordinator: Paul Rosetter

### EIR CONSULTANTS

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> Prime Consultant: Employment, Housing, and Fiscal Factors, Transportation, Air Quality, Energy, Significant Environmental Effects, Mitigation Measures, Alternatives

Nancy C. Clark: James R. McCarthy, AICP Project Manager

Associate-in-Charge

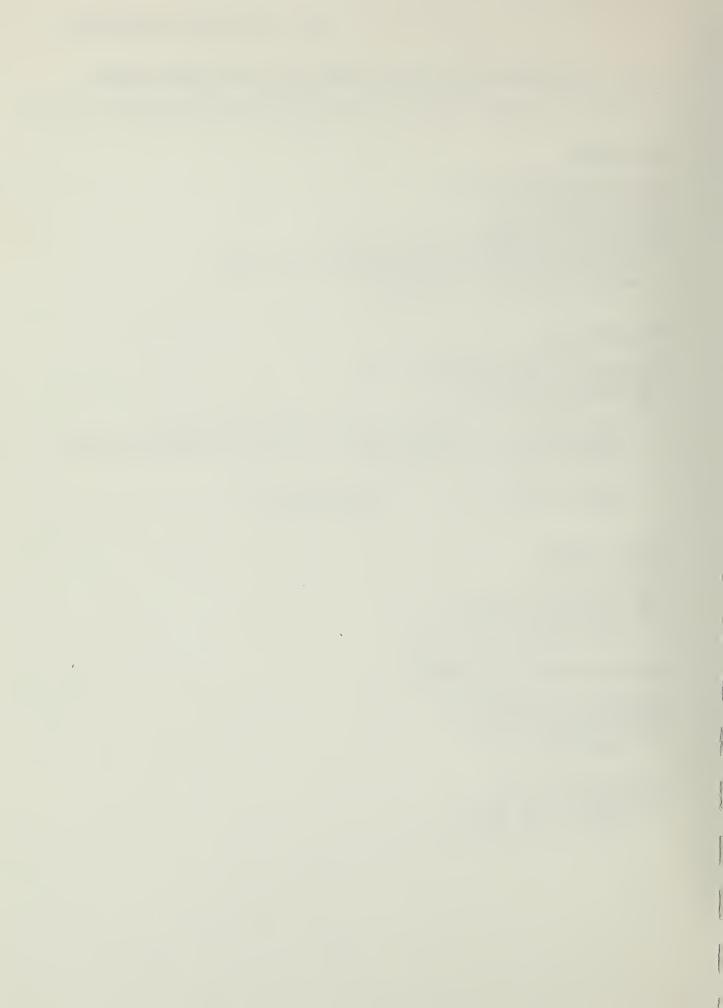
#### PROJECT SPONSOR

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# CITY AND COUNTY OF SAN FRANCISCO

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City Attorney's Office 206 City Hall San Francisco, CA 94102 Alice Suet Yee Barkley



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Sy Mauber, Manager of Public Information Bay Area Rapid Transit District 800 Madison Street Oakland, CA 94607



#### IX. DISTRIBUTION LIST

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Attn: Irwin Mussen

Bay Area Rapid Transit District 800 Madison Street Oakland, CA 94607

Golden Gate Bridge Highway
 & Transportation District
P.O. Box 9000, Presidio Station
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Metropolitan Transportation Commission Hotel Claremont Berkeley, California 94705

San Mateo County Transit District 400 South El Camino San Mateo, California 94402 Alameda-Contra Costa Transit District 508 - 16th Street Oakland, California 94612

### CITY AND COUNTY OF SAN FRANCISCO

City Planning Commission 450 McAllister Street San Francisco, CA 94102

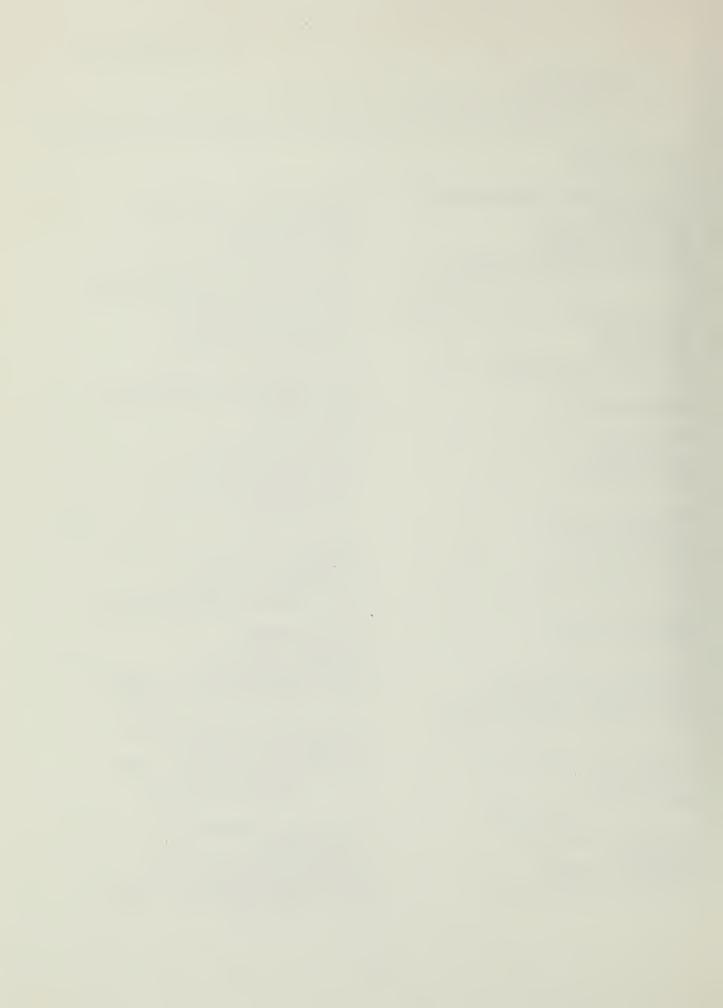
Toby Rosenblatt, President Yoshio Nakashima, Vice President Susan Bierman Jerome Klein C. Mackey Salazar Eugene Kelleher, Alternate for Richard Sklar Norman Karasick, Alternate for Roger Boas

Landmarks Preservation Advisory Board 450 McAllister Street San Francisco, CA 94102 Attn: Jonathan Malone, Secretary

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San Francisco Fire Department 260 Golden Gate Avenue San Francisco, California 94102 Attn: Joseph Sullivan, Chief of Special Services

San Francisco Department of Public Works Traffic Engineering Division 460 McAllister Street San Francisco, California 94102 Attn: Scott Shoaf



San Francisco Department of Public Works Mechanical Section 45 Hyde Street, #222 San Francisco, California 94102 Attn: Ray G. Danehy

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San Francisco Public Utilities CommissionSan Francisco, California 287 City Hall San Francisco, CA 94102

San Francisco Real Estate Department 450 McAllister Street Room 600 San Francisco, CA 94102 Attn: Wallace Wortman, Director of Property

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Building Service Employees Union Local 87 240 Golden Gate Avenue San Francisco, California 94102

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Downtown Senior Social Services 295 Eddy Street San Francisco, California 94102

Downtown Association 582 Market Street San Francisco, California 94104 Attn: Lloyd Pfleuger, Manager

Environmental Impact Planning Corp. 319 Eleventh Street San Francisco, California 94103

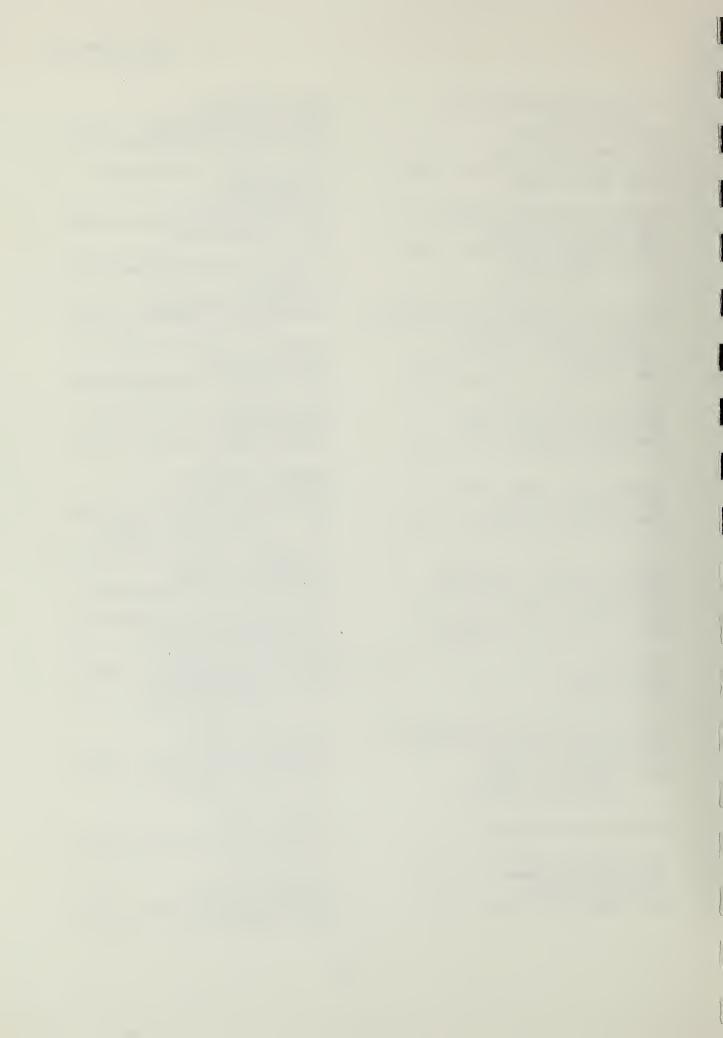
The Foundation for San Francisco's Architectural Heritage 2007 Franklin Street 94109

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Friends of the Earth 124 Spear Street San Francisco, California Attn: Connie Parrish 94105

Charles T. Gill 315 Ivy Street San Francisco, California 94102

Gray Panthers 944 Market Street San Francisco, California 94102 Attn: W. Nunnally



Gruen and Gruen Associates 564 Howard Street San Francisco, California 94104

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San Francisco Beautiful 41 Sutter Street San Francisco, California 94104 Attn: Mrs. H. Klussman, President San Francisco Building and Construction Trades Council 400 Alabama Street, Room 100 San Francisco, California 94110 Attn: Stanley Smith

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San Francisco Planning and Urban Research Association 312 Sutter Street San Francisco, California 94108

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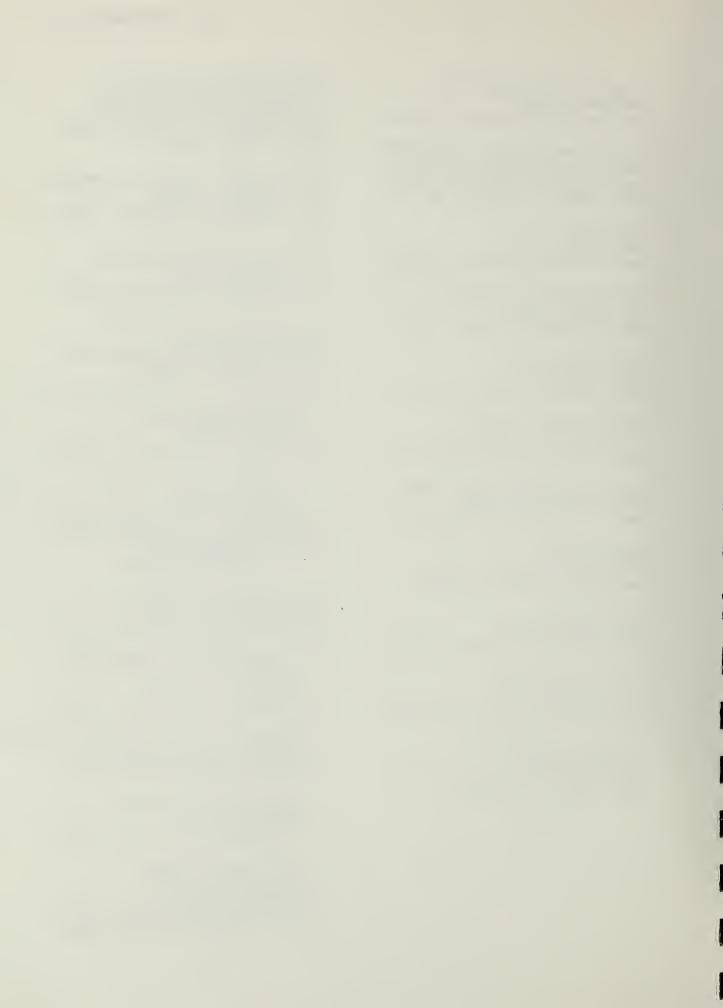
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San Franciscans for Reasonable Growth 88 First Street #600 San Francisco, California 94105

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Morrison and Foerster One Market Plaza Spear Street Tower San Francisco, California 94105 Attn: Zane Gresham Norland Properties 221 Pine Street, Suite 600 San Francisco, California 94104 Attn: Ian Stuart

David Capron Lincoln Property Company 220 Sansome Street San Francisco, CA 94104

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Carl Imparato 1205 Garfield Albany, CA 94705

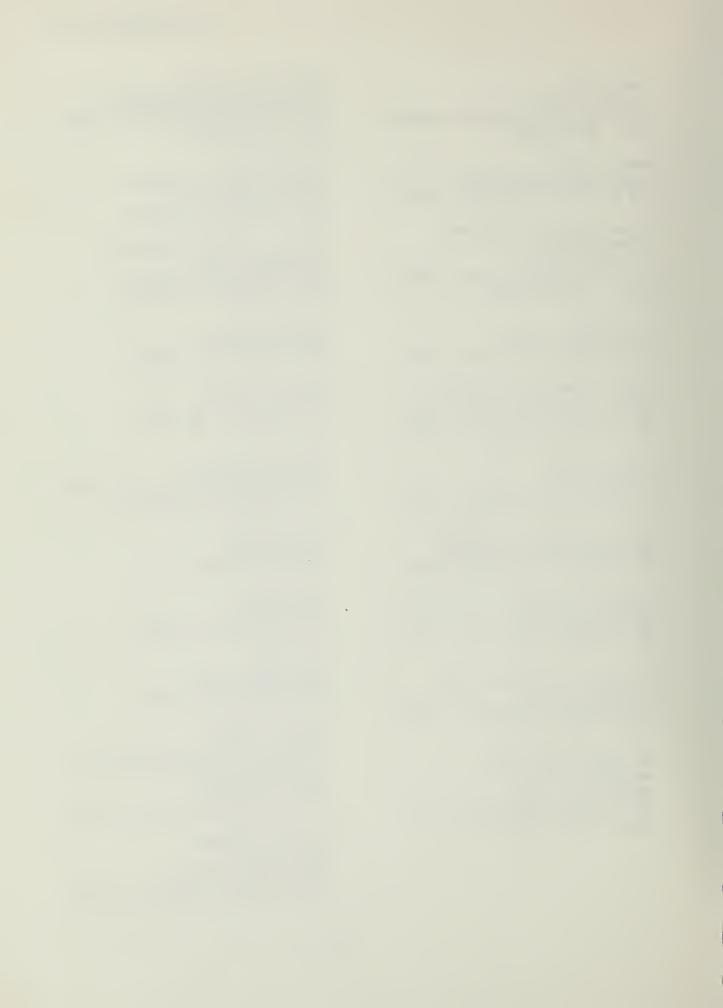
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San Francisco Chronicle 925 Mission Street San Francisco, California 94103 Attn: Marshall Kilduff

San Francisco Examiner 110 Fifth Street San Francisco, California 94105 Attn: Gerald Adams

San Francisco Progress 851 Howard Street San Francisco, California 94103

The Sun Reporter 1366 Turk Street San Francisco, Califoria 94115



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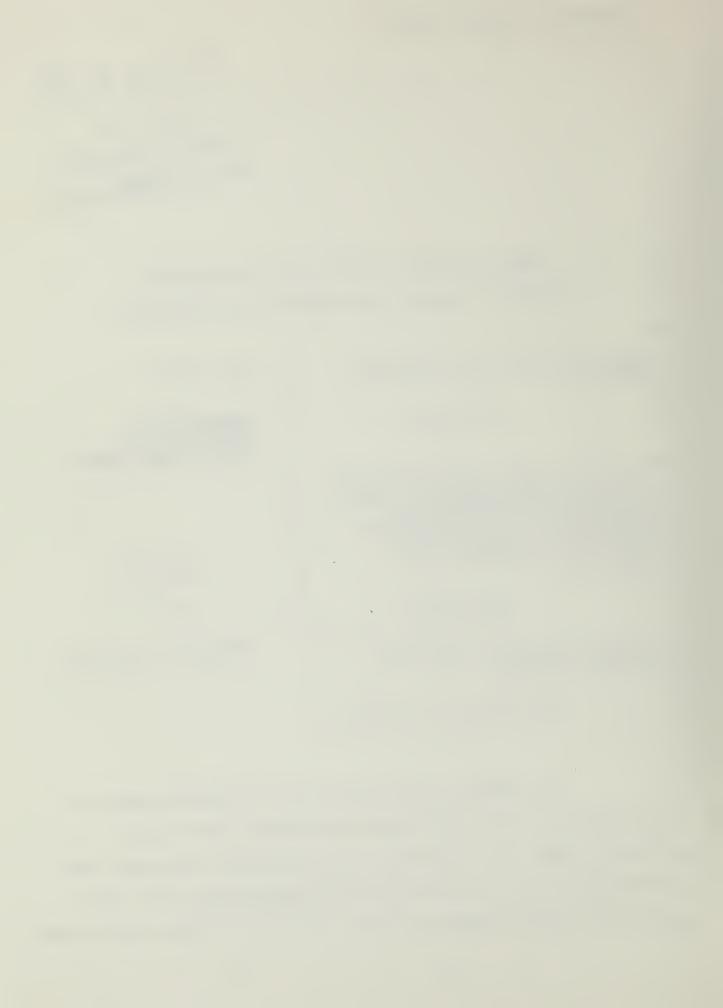
# A. COURT ORDER

Memorandum of Interlocutory Decision and Order Writ of Mandamus Interlocutory Judgement



1		San F oreigns Co. It, Sierce or Court
2		San Francisco Co. I, Director Court
3		JUL 2 2 1920
4		CARL M. OLSEN, Clerk
5		By R. TAKEI
6		assoria C'si's
7		·
8	SUPERIOR COURT OF THE STATE	TE OF CALIFORNIA
9	IN AND FOR THE CITY AND COUNT	TY OF SAN FRANCISCO
10		
11	SAN FRANCISCANS FOR REASONABLE GROWTH,	NO. 794474
12	Petitioner,	) MEMORANDUM OF
13	v.	INTERLOCUTORY DECISION AND ORDER
14	CITY AND COUNTY OF SAN FRANCISCO;	
15	PLANNING COMMISSION OF THE CITY AND COUNTY OF SAN FRANCISCO;	
16	DEPARTMENT OF CITY PLANNING OF	
17	THE CITY AND COUNTY OF SAN FRANCISCO; and DOES I-XX,	CALENDARED BY HEINEMANN
18	inclusive,	
	Respondents.	JUL 2 8 1992
19		FOR DATE(E)
20	NORLAND PROPERTIES, and DOES XXI-XL, inclusive,	
21	Real Party in Interest.	
22		
23		
24	The Amended Petition for N	Writ of Mandamus came on
25	for hearing in the above entitled Co	ourt on July 15 and
26	July 16, 1982. For purposes of hear	ring only, the matter was
27	consolidated with similar actions pe	ending before this Court
28	in Civil Actions Numbers 791 326, 79	91 327, 792 552, and 793 064.

APPENDIX A - COURT OPDERS



- 1 Appearing for petitioners were Sue C. Hestor, Esq. and
- Richard B. Satz, Esq. Appearing for respondents City and
- County of San Francisco ("the City"), and the San Francisco
- A City Planning Commission was George Agnost, City Attorney,
- 5 through Alice Suet Yee Barkley, Deputy City Attorney.
- Appearing for real party in interest Norland Properties were
- 7 Charles R. Farrar, Jr., Esq. and Penelope A. Preovolos, Esq.
- The Amended Petition for Writ of Mandamus contains
- seven causes of action. Each of these seeks a directive from
- this Court requiring respondents to set aside their approval
- authorizing the construction of a high-rise office building
- located at 135 Main Street in San Francisco ("the project").
- Approval of the project was granted by the respondent
- Planning Commission on March 25, 1982, pursuant to Resolution
- Number 9357 (A.R.II B, No. 17). Prior to the adoption of
- that resolution, respondent Planning Commission, also on
- March 25, 1982 had adopted Resolution Number 9356 (A.R.II B,
- No. 17), certifying the completion of the final Environmental
- Impact Report with respect to the Project in compliance with
- the California Environmental Quality Act and State Guidelines
- 21 with respect thereto.
- The seven causes of action in the Amended Petition
- 23 are:
- 1. First, that respondents abused their
- discretion by approving an EIR for the project when they
- lacked sufficient information on the impacts of cumulative
- downtown development (Amended Petition at 1);



```
Second, that respondents abused their
             2.
1
2 discretion in approving the EIR for the project when the
3 construction of the project will prevent an adequate analysis
4 of the cumulative impacts in the Downtown EIR and adversely
5 affect the Downtown EIR (Amended Petition at 14);
                  Third, that respondents abused their
6
7 discretion by certifying the EIR for the project and
8 approving the project when construction of the project may
 9 prevent implementation of mitigation measures the Downtown
10 EIR might develop (Amended Petition at 19);
            4. Fourth, that the EIR for the project is
11
12 inadequate in that it was an unreasonably low estimate of
13 probable future projects as the basis for computing
14 cumulative impacts (Amended Petition at 21);
                 Fifth, that respondents abused their
            5.
15
16 discretion in approving the project without requiring
17 adequate mitigation of significant adverse environmental
18 impacts (Amended Petition at 23);
                  Sixth, that respondents abused their
19
20 discretion by approving the project at a time when the City
21 did not have a legally complete master plan (Amended Petition
22 at 27); and
            7.
                  Seventh, that respondents abused their
23
24 discretion by failing to adequately respond to comments on
25 the draft EIR (Amended Petition at 30).
26
27
```

47 (3)

28



The sixth cause of action asserts that the approval must be rendered invalid by reason of the alleged failure of respondents to bring the City's Housing Element of its Master Plan into conformity with the requirements of Article 10.6 (Section 65580 et seq) of the Government Code. Those allegations are properly tried in ordinary mandate under Code of Civil Procedure § 1085. All other causes of action are properly tried pursuant to Code of Civil Procedure § 1094.5 and Public Resources Code § 21168.

The Court has reviewed the administrative record

(as supplemented by petitioner during this proceeding) in its

entirety. The Court has also considered the extensive

Memoranda and arguments presented by counsel for the parties.

The Court, having reviewed the authorities and being fully informed with respect to the issues and arguments, now makes the following decisions and conclusions.

#### CONCLUSIONS

17

1. The Project is a "housing related project"

19 within the meaning of Government Code 65587.1(b).

20 Accordingly, the relief sought by petitioner in its sixth

21 cause of action is expressly barred by that Section which

22 provides in part:

Notwithstanding any other provision 23 of law, . . . a local approval, made prior to May 1st, 1983, of a housing 24 related project shall not be invalidated due to the failure or alleged failure of 25 a City and County to comply with this article, subdividision (c) of 26 Section 65302 of the Government Code, or any regulations or guidelines adopted 27 pursuant thereto, or any other provision of law requiring or claimed to require 28



consistency with the housing element of the local plan. Government Code Section 65587.1(b) (Emphasis added.)

2

1

Petitioner's contention that section 65587.1 is void because

4 it applies special legislation to the detriment of a particu-

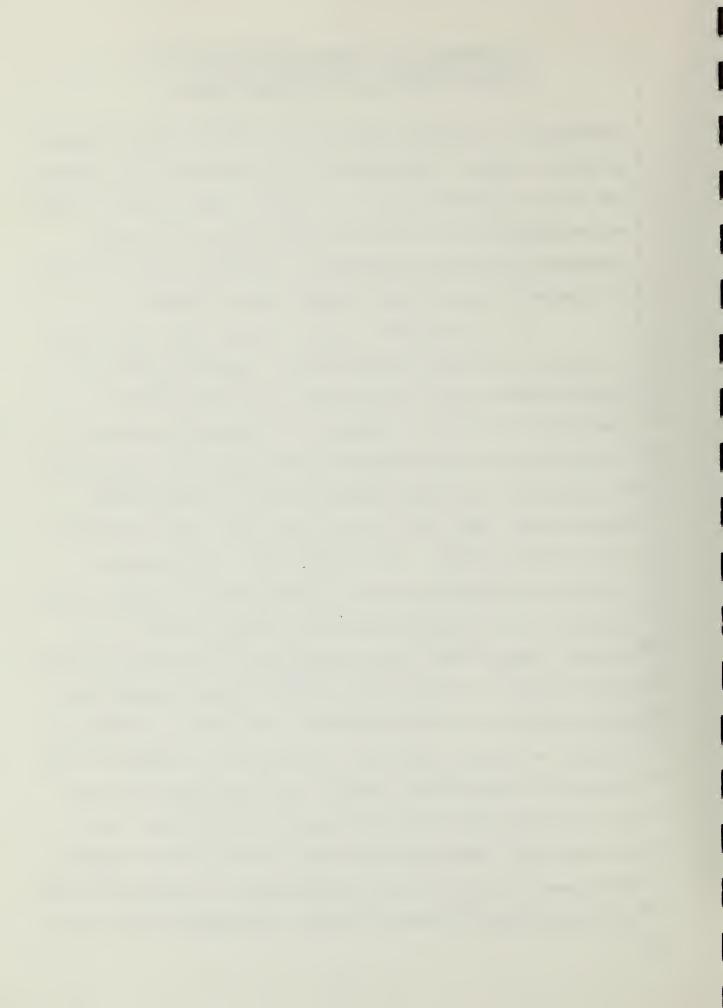
lar class is without merit. In view of that section, it was

not necessary for the Court to decide any of the other

arguments or defenses asserted by respondents and real party

in interest to petitioner's sixth cause of action.

9 Petitioner's first, second, and third causes 10 of action are founded on petitioner's assertion that the project approval must be rendered invalid by reason of respondents' failure to complete and consider information to 13 be developed by and contained in the program EIR authorized 14 by respondent Planning Commission under its Resolutions 15 Numbers 8474, 8480, 8521, 8730, 8735, 8791, 8990, and 8979 16 ("the Downtown EIR"). The Downtown EIR was designed to 17 examine and evaluate various alternatives to downtown zoning proposals in a focused environmental impact report. 19 purpose, among others, was to evaluate the potential environ-20 mental impacts of such zoning proposals and to present for public review a set of comprehensive and final revisions to 22 relevant sections of the City Planning Code. Nothing in the 23 California Environmental Quality Act, the State Guidelines, 24 the Government Code, the San Francisco City Charter, the San Francisco Administrative Code, or the case law supports petitioner's position that the pendency of a program EIR such 27 as the Downtown EIR herein disables respondents from acting 28



- 1 upon and/or approving and certifying individual project EIRs
- pending completion of the program EIR or from approving such
- projects. Accordingly, the relief sought in petitioner's
- 4 first, second and third causes of action must be denied.
- 3. There is substantial evidence in the record to support each of the findings contained in respondent Planning Commission's Resolution Number 9356 certifying the completion of Final Environmental Impact Report and in Resolution Number 9357 approving the project, except in the following
- Cumulative Impacts. The EIR evaluated A. 11 12 cumulative environmental impacts related to the proposed 13 project and other similar projects (Guidelines § 15023.5) on 14 the basis of the approximately 2.6 million square feet of new 15 office space under construction, approved for construction or 16 proposed within an approximate two block radius of the 17 proposed Norland project. The Commission did not explain its 18 decision to limit analysis of cumulative impacts in the EIR 19 to those cumulative impacts resulting from the 2.6 million 20 square feet of development in the two block area around the 21 Norland project, rather than including in the analysis the 22 entire downtown commercial district (C-3) as has been the 23 practice of prior EIRs certified by the Commission; and В. Air Quality. The Commission did not 24 25 adequately explain its finding in the EIR and in Resolution 26 No. 9357 that the project would not contribute to significant 27 cumulative impacts on air quality.

10 respects:



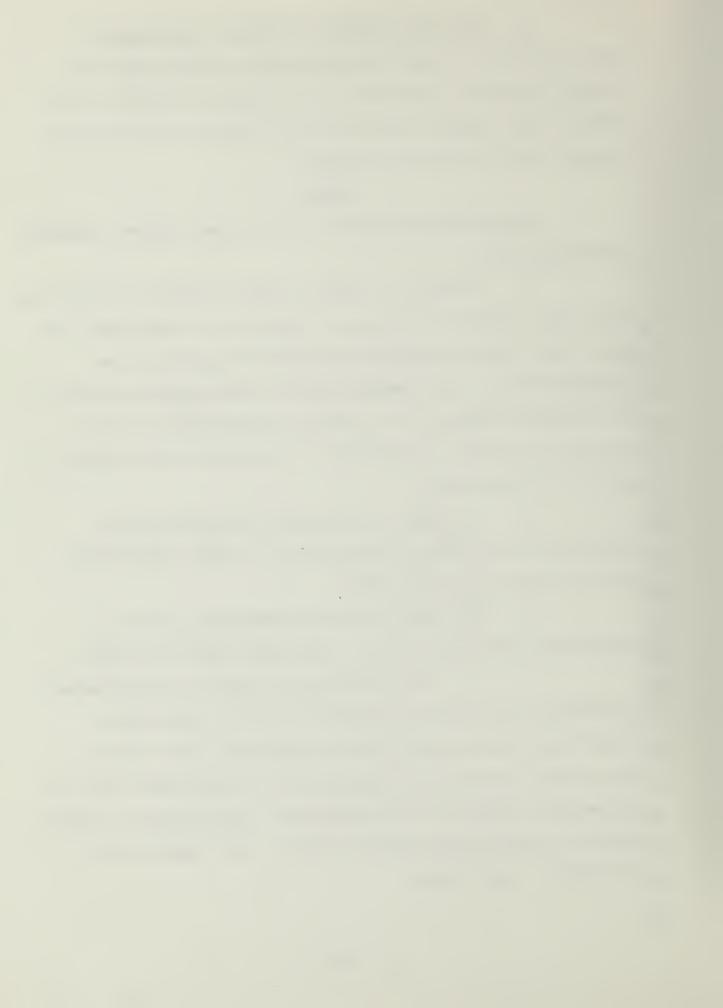
4. For the reasons set forth in paragraph 3
2 above, the relief sought in petitioner's fourth and fifth
3 causes of action is granted to the extent set forth in this
4 Court's Order herein, and the relief sought in petitioner's
5 seventh cause of action is denied.

6 ORDER

GOOD CAUSE APPEARING, it is hereby ordered, adjudged and decreed that:

- 1. Pursuant to Code of Civil Procedure § 1094.5(f),
  this Court orders the Planning Commission to reconsider its
  prior resolutions certifying the EIR and approving the
  proposed project, and remands the EIR and proposed project to
  the Planning Commission for further consideration of the
  matters set forth in paragraphs 3(A) and (B) of the Conclusions set forth above.
- 2. On remand, the Planning Commission shall undertake such further proceedings as it deems appropriate and consistent with this Order.
- 3. The Court finds and determines that the following procedures would be consistent with this Order:
- A. The Commission may cause to be prepared a 22 Supplement to the EIR ("Supplemental EIR") which shall 23 address the matters set forth in paragraphs 3(A) and (B) of 24 this Court's Conclusions hereinabove, in accordance with the 25 procedures contained in the Guidelines, applicable to supplements to environmental impact reports, most specifically 27 §§ 15067.5, and 15085(d).

28



- B. Upon completion and certification of the
- 2 Supplemental EIR, the Planning Commission may reconsider the
- 3 proposed project in light of the EIR and Supplemental EIR,
- 4 and may adopt such findings and mitigation measures as it
- 5 deems proper and within its lawful discretion, and may
- 6 approve the proposed project with such conditions as it deems
- 7 proper and within its lawful discretion.
- 8 C. The City may allow any person objecting
- q to any approval or disapproval of the proposed project after
- 10 reconsideration by the Planning Commission to appeal such
- 11 determination to the Board of Permit Appeals within ten (10)
- 12 days after the later to occur of (1) adoption of a resolution
- 13 approving or disapproving the proposed project or (2) posting
- 14 of a notice advising of the adoption of such a resolution and
- 15 stating the right of any person so interested to appeal said
- 16 resolution and determination to the Board of Permit Appeals,
- 17 such posting to be at the place and in the manner provided in
- 18 the Administrative Code and Municipal Code of the City and
- 19 County of San Francisco for the posting of notice of issuance
- 20 of a site or building permit.
- D. Any such appeal shall be conducted in
- 22 accordance with applicable provisions of law, including
- 23 specifically the Charter of the City and County of
- 24 San Francisco, the Administrative Code of the City and County
- 25 of San Francisco and the Rules of the Board of Permit Appeals.
- 26 4. This Order shall not be construed to prohibit
- 27 or limit the exercise by the Planning Commission of its
- 28 lawful jurisdiction and discretion to cause to be prepared,



or to certify or not to certify the Supplemental EIR, to

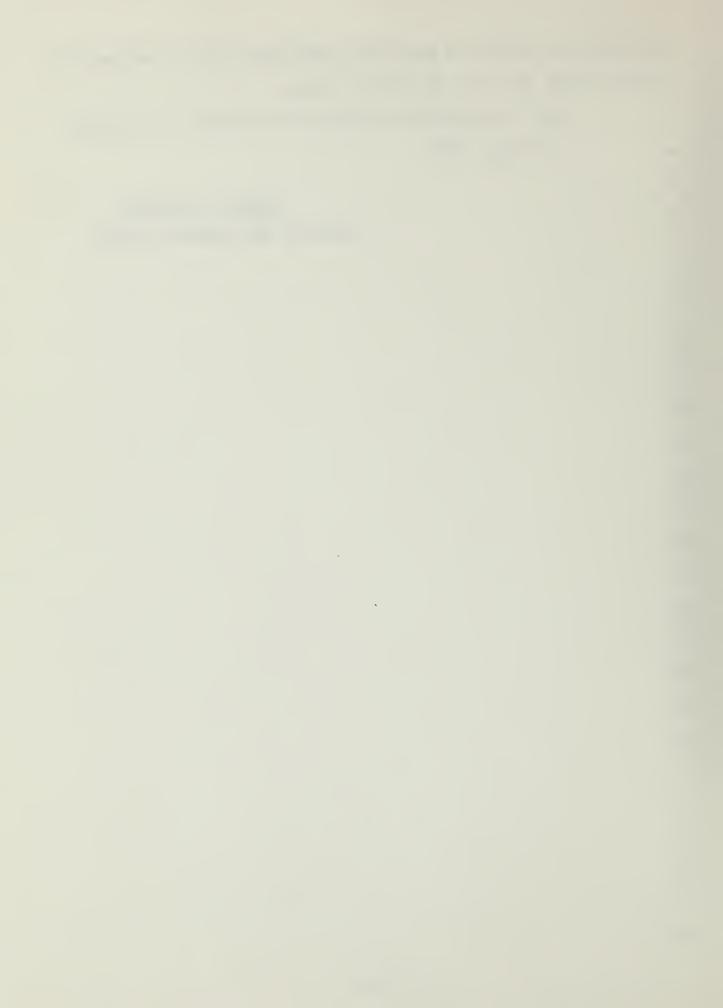
adopt or not to adopt proposed mitigation measures or pro
posed findings of overriding considerations, or to approve or

not to approve the proposed project.

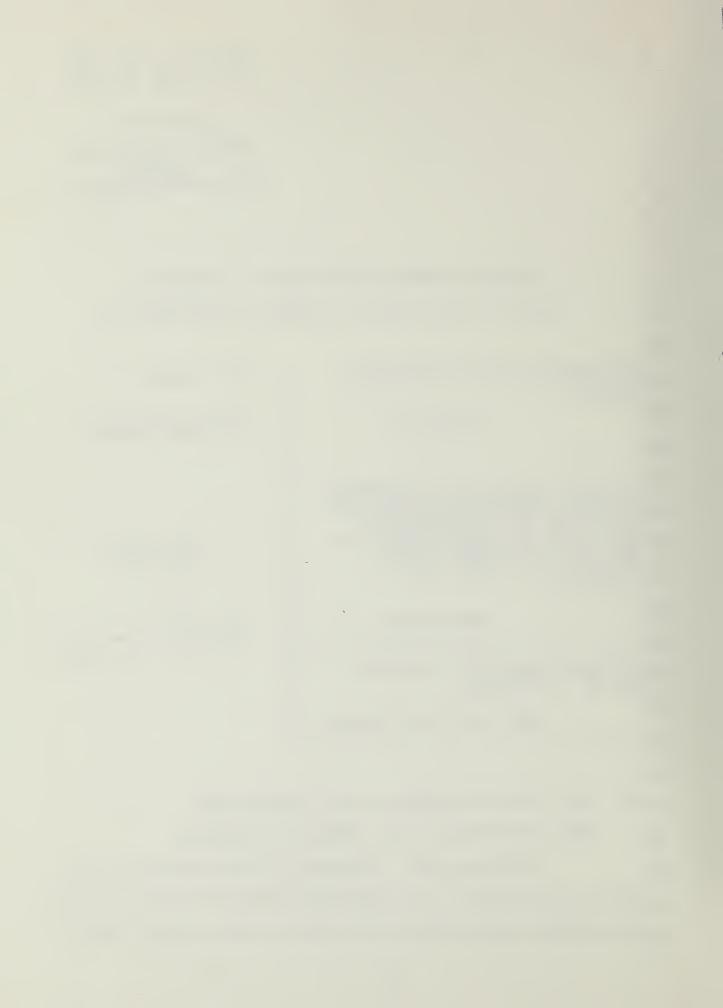
- This Court retains jurisdiction over the 5 subject matter of this action, and all proceedings relating 7 to the proposed project. Any objection to the certification g of a Supplemental EIR prepared pursuant to paragraph 2 or 3 of this Order, or approval by the Commission of the proposed 10 project based in part thereon, shall be made within thirty (30) days after the filing of a Notice of Determination based on 12 such certification and approval pursuant to Public Resources 13 Code § 21152, as would otherwise be required under Public Resources Code § 21167 for the institution of an action challenging such a certification and approval. Any other objections to any action taken by the Planning Commission or 17 Board of Permit Appeals pursuant to this Order shall be 18 presented to this Court for any such relief as is proper 19 within fifteen (15) days after the action or inaction of the Planning Commission or Board of Permit Appeals complained of.
- 21 6. Subject to further Order of this Court,
  22 pending reconsideration by the Planning Commission of the
  23 proposed project based on the Supplemental EIR, all permits,
  24 approvals and authorizations heretofore granted by the City,
  25 or any of its officers, employees, agencies or commissions,
  26 to the real party in interest with respect to the proposed
  27 project shall be suspended except to the extent necessary for
  28 the real party in interest to complete demolition of structures



1	on t	he site which are parti-	ally demolished, and to secure the
2	site	in the interest of pub	lic safety.
3		Let Interlocutory	Judgment be entered accordingly.
4		July <u>γ√</u> , 1982.	
5			DANIEL II WEINCTEIN
6			Judge of the Superior Court
7			oudge of the puperior court
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2		San Frantisco Court, Dinotion Court
3		JUL 2 2 1982
4		CARL M. OLSEN, Clerk
5		By R. TAKEI
6		
7		
8	SUPERIOR COURT OF THE STATE	TE OF CALIFORNIA
9	IN AND FOR THE CITY AND COUNT	TY OF SAN FRANCISCO
10		
11	SAN FRANCISCANS FOR REASONABLE GROWTH,	NO. 794474
12	Petitioner,	) WRIT OF MANDAMUS
13	v.	
16	CITY AND COUNTY OF SAN FRANCISCO; PLANNING COMMISSION OF THE CITY AND COUNTY OF SAN FRANCISCO; DEPARTMENT OF CITY PLANNING OF THE CITY AND COUNTY OF SAN FRANCISCO; and DOES I-XX, inclusive,	CALENDARED  BY HEINEMANN  JUL 28 (39)
18	Respondents.	FOR DATE(S)
19		
20	NORLAND PROPERTIES, and DOES XXI-XL, inclusive,	
21	Real Party in Interest.	)
22		
23		
24	TO: THE CITY AND COUNTY OF SAN FRAN	NCISCO AND
25	THE SAN FRANCISCO CITY PLANNING	G COMMISSION
26	We command you, immediate	ly upon receipt of this
27	writ, to reconsider your resolutions	s 9356 and 9357 certifying
20	the 135 Main EIR and approving the 1	135 Main project (which



1	proceedings are nereby remainded to you), in light of the
2	matters set forth in paragraphs 3(A) and (B) of this Court's
3	Conclusions contained in its Memorandum of Interlocutory
4	Decision and Order dated July, 1982, and to undertake such
5	further proceedings as are consistent with this Court's
6	Memorandum of Interlocutory Decision and Order or as are
7	enjoined upon you by law; but nothing in this Writ shall
8	limit or control in any way the discretion legally vested in
9	you.
10	Dated: July 2, 1982.
11	DANIEL H. WEINSTEIN
12	Judge of the Superior Court
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2		San Francisco Courty Carmier Court
3		JUL <b>2</b> 8 1982
4		CAPL M. OLSEN, Clerk
5		Deputy Clers
6		
7		
8	SUPERIOR COURT OF THE STATE	TE OF CALIFORNIA
9	IN AND FOR THE CITY AND COUNT	TY OF SAN FRANCISCO
10		
11	SAN FRANCISCANS FOR REASONABLE GROWTH,	) NO. 794474
12	Petitioner,	) INTERLOCUTORY
13	v.	) JUDGMENT )
15 ] 16 ]	CITY AND COUNTY OF SAN FRANCISCO; PLANNING COMMISSION OF THE CITY AND COUNTY OF SAN FRANCISCO; DEPARTMENT OF CITY PLANNING OF THE CITY AND COUNTY OF SAN FRANCISCO; and DOES I-XX, inclusive,	CALENDARED  BY HEINEMANN  JUL 28 1941
18	Respondents.	FOR DATE(S)
19 -		
20 2	NORLAND PROPERTIES, and DOES XXI-XL, inclusive,	) )
21	Real Party in Interest.	) )
22 -		)
23		
24	The Amended Petition for V	Writ of Mandamus came on
25	for hearing in the above-entitled Co	ourt on July 15 and
26 '	July 16, 1982. For purposes of hear	ring only, the matter was

27 consolidated with similar actions pending before this Court

28 in Civil Actions Numbers 791 326, 791 327, 792 552, and 793 064.



1	The Court has reviewed the administrative record
2	(as supplemented by petitioner during this proceeding) in its
3	entirety. The Court has also considered the extensive
4	Memoranda and arguments presented by counsel for the parties
5	The Court having reviewed the authorities and arguments, now
6	makes this Interlocutory Judgment as follows:
7	IT IS HEREBY ORDERED, ADJUDGED AND DECREED THAT:
8	1. The Writ of Mandamus executed this date shall
9	issue to Respondents City and County of San Francisco and
10	Planning Commission; and
11	2. Further proceedings shall be held before this
12	Court pursuant to the Memorandum of Interlocutory Decision
13	and Order, executed this date, as well as other proceedings
14	as they appear necessary.
15	Dated: July 7, 1982. DANIEL H. WEINSTEIN
16	Judge of the Superior Court
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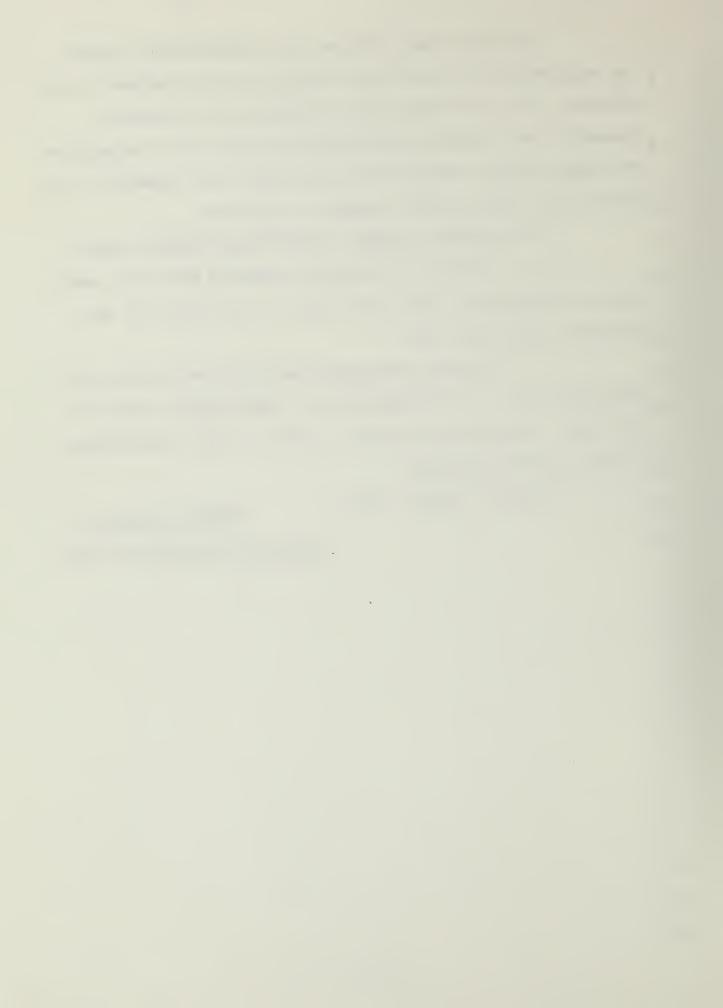
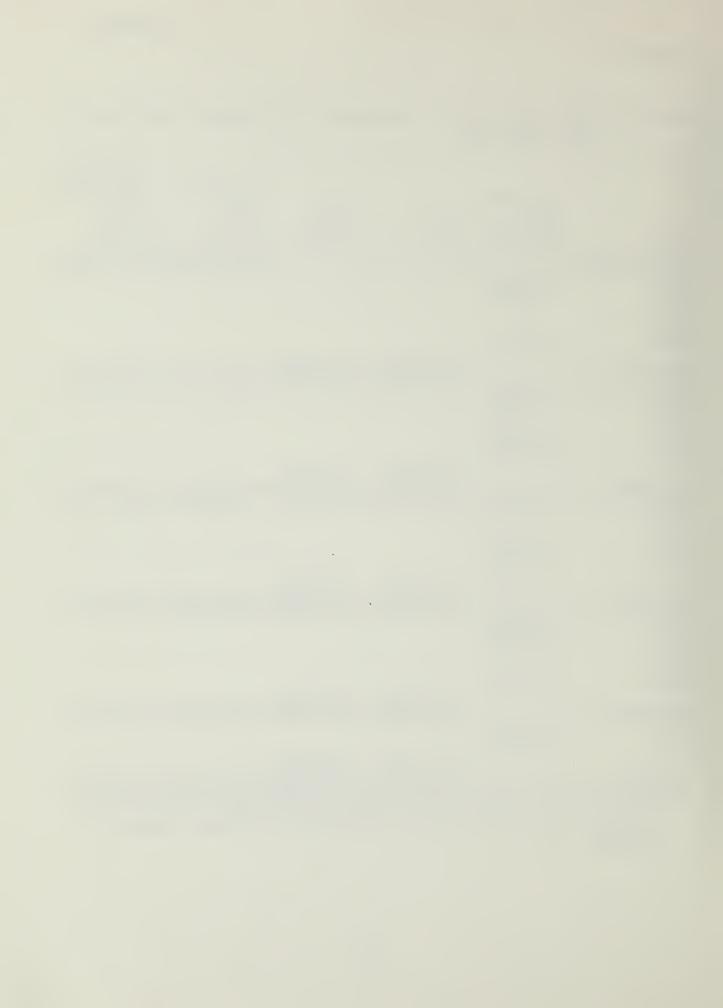


TABLE B-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1981 IN GROSS SQUARE FEET

Year	Total Gross Sq. Ft. Completed	5-Year Total	5-Year Annual Average	Cumulative Total of All Office Buildings	Cumulative Total of All Downtown Office Buildings
Pre-year 1960				28 145 000**	24,175,000***
1960	1,183,000			2:5,147,000	27,177,000
1961	270,000				
1962					
1963 1964	1,413,000				
1304	1,415,000	2,866,000	573,200		
1960-1964		(2,580,000)*	(516,000)*	30,725,000	26,754,000
T955	1,463,000				
1965	973,000				
1967	1,453,000				
1968 1969	1,234,000 3,256,000				
1303	3,230,000	8,379,000	1,675,800		
1965-1969		(7,541,000)*		* 38,266,000	34,295,000
1970	7,853,000		<u> </u>		
1971					
1972	1,961,000				
1973 1974	2,736,000 2,065,000				
19/4	2,005,000	8,615,000	1,723,000		
1970-1974		(7,753,000)*		* 46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1973	2 522 000				
1979	2,532,000	8,157,000	1,631,400		
1975-1979		(7,341,000)*		* 53,360,000	49,389,000
1980	1,284,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1981	3,029,000				
		4,313,000+	2,156,500+		
1980-1981	000/			* 57,241,700	
* Net equals	90% or aross	. Net new Sha	ce is added	at an increa	se ractor of

Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that on the average space equal to 10% of a new building is demolished to make land available for the new replacement building.



### Table B-1 Continued

Source: San Francisco Downtown Zoning Study, Working Paper No.1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.

\*\*\* Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.

Two-year total and average.

SOURCE: Department of City Planning, August 1, 1982.



TABLE 8-2: PROJECTED EFFECTS OF DOWNTOWN OFFICE DEVELOPMENT ON REGIONAL HOUSING MARKETS, 1932-90

San Francisco (a) Peninsula (b) (San Mateo and Santa Clara Counties) East Bay (b) (Alameda and Contra Costa Counties)	in 1985 No. Households 110 to 230 140	9,700 to 25,800 ll,600	1,600 14,900 19,300 14,900	Stock Growth 1982-1990(d) No. Wnits 12,000 87,600	Percent of Growth, 1982 to 1990  Project Cumulative 0.9 to 57.5 to 119.2  0.2 10.2  0.2 13.3	1940 CumuTative 57.5 to 119.2 10.2
,	100 	7,700 48,300 to 64,400	5,900 36,600 to 44,000	36,800	0.3 0.2 to 0.3	0.3 16.0 0.2 to 14.7 to 0.3 17.7

Program (OHPP) Interim Guidelines," Department of City Planning, January 22, 1982 (40% of all employees would reside (a) The range of San Francisco employees and households based on a report prepared by Recht Hasrath Associates, referenced as Appendix C in the 101 Montgomery Street Final EIR, EE 80.26, Certified May 7, 1981 (15-30% of all employees would reside in San Francisco and 1.4 Workers Would occupy each household) and "Office Housing Production in San Francisco and 1.8 workers would occupy each household).

(b) Distribution of employees based on weighted average of expected employees in Federal Reserve Bank (EE 78.207), 101 California Street (EE 78.27), Pacific Gateway, (EE 78.61), and Crocker National Bank (EE 78.298), from 456 Montgomery Street Final EIR (EE 78.178) p. 167 (18% in the Peninsula, 30% in the East Bay, and 12% in the North Bay). Number of workers per household in these counties is assumed to be 1.3 based on 1980 Census data.

(c) Total office space considered in this analysis is about 16.1 million sq. ft. of net new office space (see Tables C-1 and C-2). The proposed Housing Element (May 1982) estimates San Francisco housing needs from 1980-85 in Table 21A. This estimate, based on the Citizen's Housing Task Force Report, July 21, 1981, shows a need for about 16,000 to 19,000 units. The "needs" estimate uses a similar office development basis, but also includes housing demand generated by other sources in addition to office development and covers the years 1980-85.

Projections contained in that document for 1980-1990 were prorated to reflect 1982-1990 net housing stock growth. d) Net housing stock growth is based on "Projections 79," Association of Bay Area Governments, January 1980.

SOURCE: Environmental Science Associates, Inc.

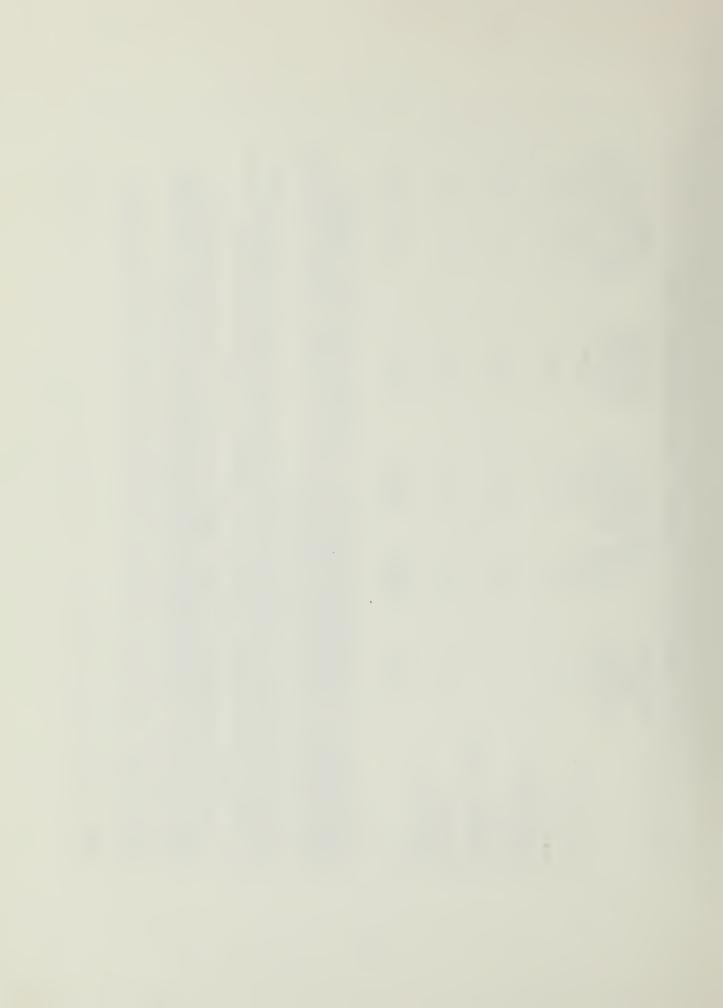


TABLE B-3: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME

Pe	Gross nual Income er Household or er Individual	Maximum Affordable Monthly Housing Expenditure*	Housing Cost and Type of Unit  Monthly Cost** Type of Unit (Price	Source
	\$5,000	\$125		
	8,300 (a)	208		
	10,000	250		
F	10,680	267	\$267 - Census Median Rent	(el)
£	11,560	289	289 - Studio Apartments	(f1)
End	15,000	375	and the factor of the control of the	ke dia didiki sebabah dian di menterikan sadi s
1	18,200	455	455 - Median Rent, All Units	
<b></b>	20,000	500	and the second	AND THE TOTAL OF
Γ-	23,520	588	588 - Rent, 3+ Bedroom Units	(f3)
<b>L</b> .	25,000 (b)	625	tenes of occurrence of the control o	
	27,300 (c)	683		
	30,000 (b)	750		
	35,000	875		
	40,000	1,000		
	40,880		1,022 - Lowest House Price (\$95,0	000) (g1)
ì	45,000		1,125 - Census Median Value (104,	
<b>.</b>	50,000	1,250	The second of th	, vo (ez )
	52,560 (d)	1,314		
	55,000	1,375		
ţ	65,080	1,627	1,627 - Median House Price (151.)	2021 (22)
	1	1,027	1,627 - Median House Price (151,	203) (g2)
-	101,880	2 547	2,547 - Highest House Price (236,	750) (23)
i	4	2,547	2,577 - nightst nouse frice (230,	750) (g3)
	300,000 (d)	7 500		
	(4)	7,500		

See following page for references.



## TABLE B-3: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME (continued)

- \* The Office/Housing Production Program (OHPP) Interim Guidelines (January, 1982) define affordable housing as follows:
  rental expenses not exceeding 30% of gross monthly income, adjusted for family size; and home ownership expenses not exceeding 38% of gross monthly income, adjusted for family size, including mortgage payments, property taxes, insurance, and/or homeownership association dues.
  For the purpose of this table, 30% of gross monthly income is used to calculate housing affordability for both renters and owners. For owners it is assumed that 8% of gross monthly income would cover property taxes, insurance, and/or homeownership association dues and other related expenses. No adjustment has been made for family size because family circumstances vary widely.
- \*\* Monthly housing costs refer to rents and mortgage payments for the housing prices shown in parentheses; sources of rents and house prices are as footnoted. Monthly costs of ownership housing were calculated as monthly mortgage expenses assuming 20% down payment, 30-year mortgage, and 16% interest rate, not including insurance, property taxes, and other related housing costs.
- a. U.S. Bureau of Labor Statistics, March, 1981, "Area wage survey for the San Francisco-Oakland, California Metropolitan Area." \$8,300 was the mean 1980 income of inexperienced file clerks, one of the lowest-paid office occupations listed.
- b. The range of \$25,000 to \$30,000 is assumed to approximate the median annual income of project employees.
- c. The \$27,300 income figure was derived by inflating the \$16,300 median income of downtown office workers from the 1974 SPUR survey through December, 1981 by 67% using U.S. Bureau of Labor Statistics national wage information for nonsupervisory finance, insurance, and real estate sector employees since 1974.
- d. Montgomery-Washington Building FEIR, 81.104E, certified January 28, 1982. The median salary of wage earners at 601 Montgomery St. was estimated to be \$52,560 and the highest salary for corporate officers \$300,000, based on a 1981 survey.
- e. City Planning and Information Services, "1980 Census Information," March 1982: 1. median rent 2. median noncondominium housing value Rental data include residential hotels whose rent levels may be substantially lower than other types of rental dwellings and may therefore have an effect on the median rent.
- f. Department of City Planning, "Rent Survey," 1980. Median rents are for:
  1. studio apartments
  2. all units
  3. 3+ bedrooms
  These data are based on a small nonrandom sample of newspaper ads and may not reflect true rental costs.
- g. San Francisco Board of Realtors, "Multiple Sales Service," October 5, 1981.
   (Annual data on housing sales prices including all homes sold from February 11, 1981 to October 1, 1981):
   1. lowest price
   2. median price
   3. highest price

SOURCE: Environmental Science Associates, Inc.

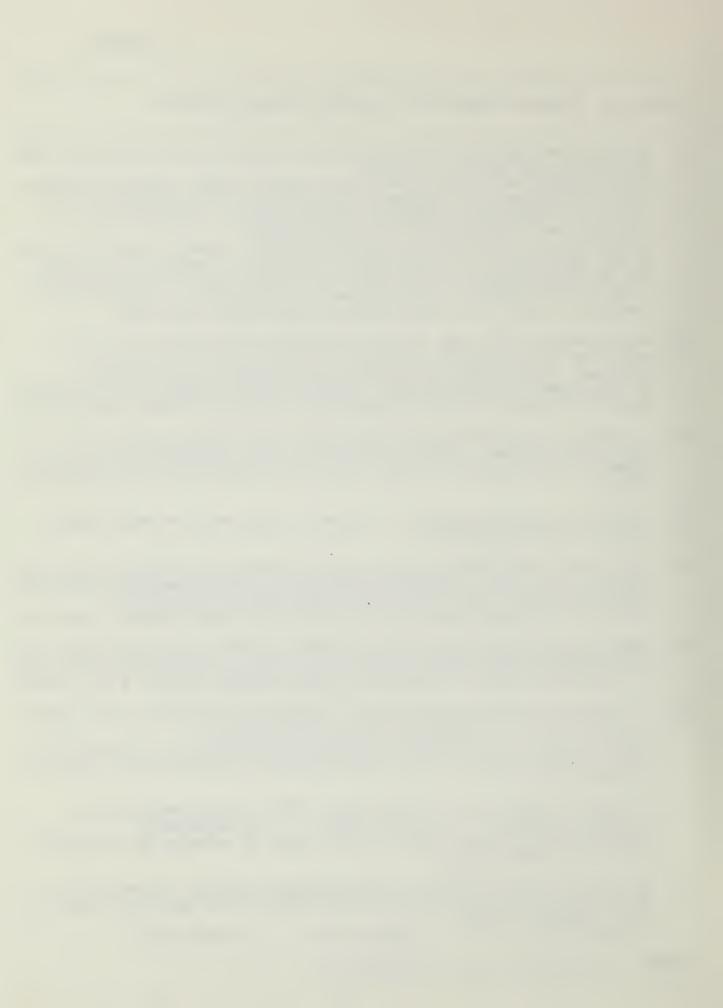


TABLE C-1: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO OF AUGUST 6, 1982

## PROJECTS UNDER FORMAL REVIEW

	PRUJECTS UNDER FURMAL	- KEVIEW
Assessor's Block	Case No.	Project Name
58 112 136 176 228 240 265 269 270 288 288 669 716 3702 3703 3707 3707 3708 3733 3760 3776 3778 3781	82.234ED 81.258 81.245 81.673 81.610ED 81.705ED 81.195ED 81.132ED 81.175ED 81.461ED 81.667ED 81.581ED 81.549ED 81.549ED 81.494ED 81.492ED 81.493ED 81.245C 81.493ED 82.29E 81.386 81.59 81.630ED 82.99E	Roundhouse Ice House Conversion (C) 955 Front at Green Columbus/Pacific Savoy 569 Sacramento (C) 580 California/Kearny 388 Market at Pine Russ Tower Addition 466 Bush 333 Bush (Campeau) 222 Kearny/Sutter 1361 Bush (C) Polk/O'Farrell 1145 Market 1041-49 Market 90 New Montgomery New Montgomery Pl. 71 Stevenson at Ecker 832 Folsom 401 6th Welsh Commons 548 5th/Brannan Greyhound Bus Terminal
3786 3789 9900 9900 9900	82.33E 82.31EV 81.63	655 5th/Townsend 615 2nd/Brannan (C) Ferry Building Rehab Pier One Development Agriculture Building



# APPROVED PROJECTS

	Assessor's Block	Case No.	Project Name
106		81.415ED	1299 Sansome
161		80.191	Mirawa Center
164		81.631D	847 Sansome
164		81.573D	50 Osgood Place
166		CU81.7	222 Pacific (C)
166		80.15	750 Battery
206		81.165D	401 Washington at Battery
227		80.296	Bank of Canton
261		81.249ECQ	333 California
262		81.206D	130 Battery
267		81.241D	160 Sansome
263		81.422D	250 Montgomery at Pine
271		81.517	453 Grant
27 1		3.43.7	582 Bush
294		82.870	44 Campton Place
311		82.120D	S.F. Federal
351		DR79.24	Mardikian/1170-1172 Market
3512		82.14	Van Ness Plaza
3518		81.483V	291 10th St.
3705		80.315	Pacific III Apparel Mart
3709		81.113ED	Central Plaza
3715	· )	82.16EC	121 Steuart
3717	1	80.349	Spear/Main (160 Spear)
3717		82.82D	135 Main
3722		81.548DE	466 Clementina (C)
3722		81.417ED	144 Second at Minna
3724		81.102E	Holland Ct. (C)
3729		82.860	774 Tehama
3733		81.2	868 Folsom
3735		80.106	95 Hawthorne (C)
3738		DR80.5	315 Howard
3741		82.203C	201 Spear
3749		81.18	Marathon - 2nd & Folsom
3751		77.220	National Maritime Union
3752		77.220	Office Bldg. (YBC SB-1)
3763		81.287V	490 2nd at Bryant (C)
3763		81.381	480 2nd at Stillman (C)
3775		81.147V	338-340 Brannan (C)
3776		81.693EV	539 Bryant/Zoe
3788		81.296Z	690 2nd/Townsend (C)
3787		81.306	252 Townsend at Lusk
3789		81.552EV	625 2nd/Townsend (C)
3794		81.569EV	123 Townsend
3803		81.244D	China Basin Expansion



### PROJECTS UNDER CONSTRUCTION

Assessor's Block	Case No.	Project Name
163	81.1	901 Montgomery
164	81.2510	936 Montgomery-(disco)
167		Golden Gateway III
196		736 Montgomery
196	CU79.49	Pacific Lumber Co.
208	81.104EDC	Washington/Montgomery
237	DR80.6	353 Sacramento (Daon)
239	DR80.1	456 Montgomery
240 263	DR80.16	550 Kearny
287	CU79.12	101 California
288	81.550D DR80.24	Sloane Building (C) 101 Montgomery
289	81.308D	One Sansome
292	DR79.13	Crocker National Bank
312	79.370	50 Grant
351	79.133	U.N. Plaza
762	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Opera Plaza
3702	81.25	1155 Market/8th
3708	80.34	25 Jessie/Ecker Square
3709	80.36	Five Fremont Center
3712	79.11	Federal Reserve Bank
3715		141 Steuart
3717	79.236	101 Mission at Spear
3717		150 Spear
3718	79.12	Pacific Gateway
3724		Yerba Buena West
3735		Convention Plaza

<sup>\*</sup> Includes all office projects in the greater downtown area and the South of Market area for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved. It does not include projects in the Rincon Point - South Beach or Yerba Buena Center Redevelopment Areas for which no Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission, as it is not possible to know what development will be approved in these areas. It does not include Mission Bay as no formal proposal has been submitted to the City and the project is still in early planning stages.

\*\* The letter (C) after a project refers to a conversion (generally industrial and/or warehouse space to office space).

SOURCE: Department of City Planning.

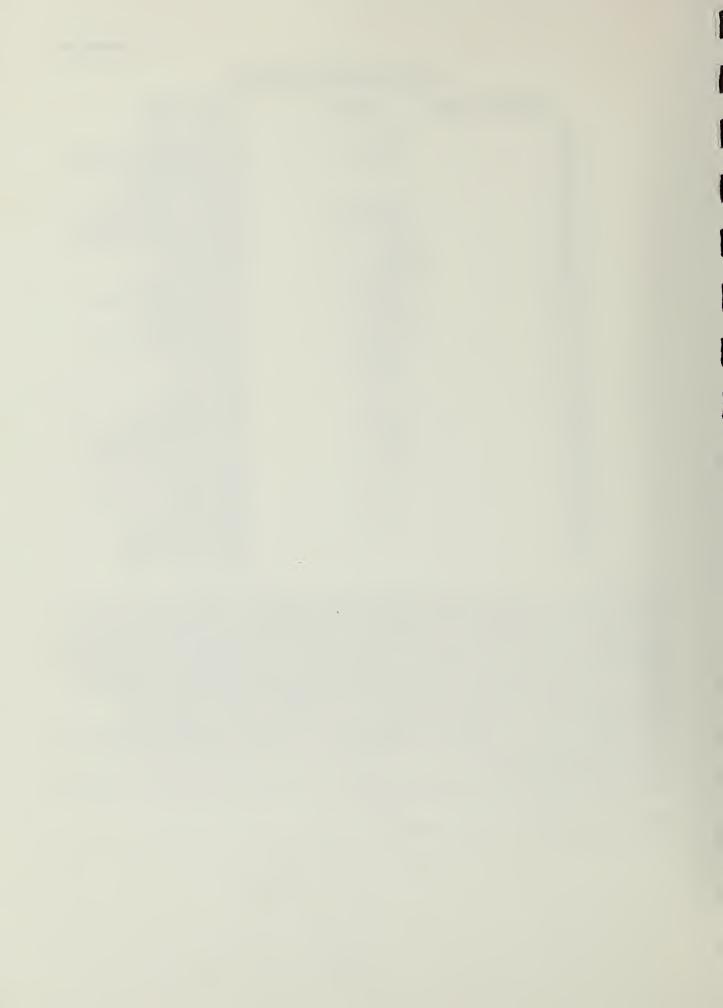
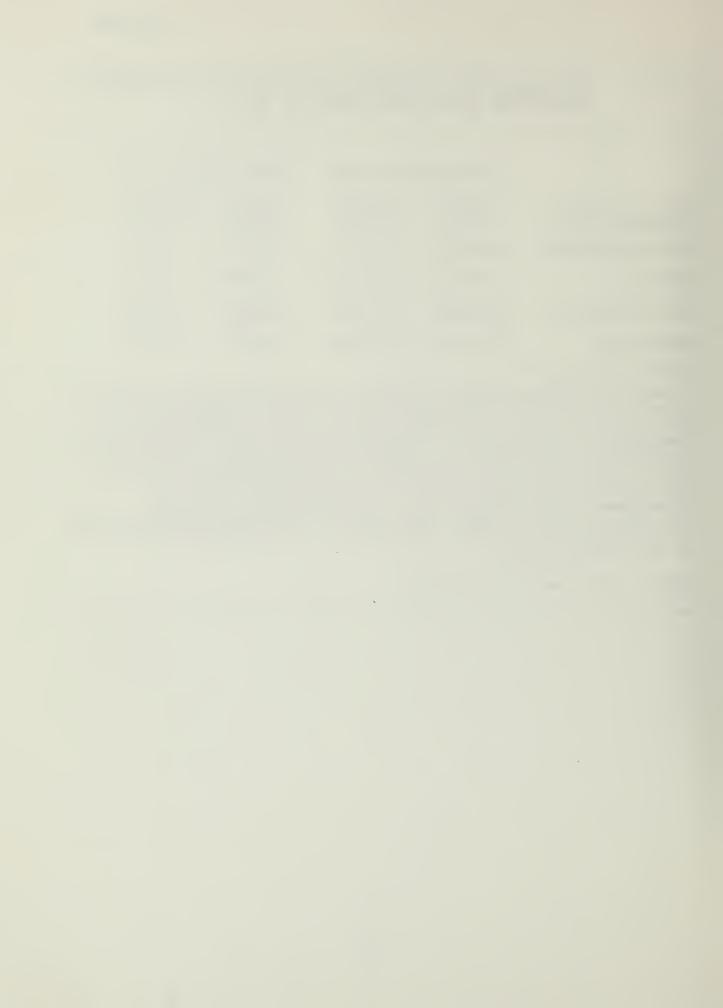


TABLE C-2: GROSS SQUARE FEET OF CUMULATIVE OFFICE AND RETAIL DEVELOPMENT\* IN DOWNTOWN SAN FRANCISCO AS OF AUGUST 6, 1982

	Office (Gr	Office (Gross Sq. Ft.)		ss Sq. Ft.)
Status of Project	Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.
Under Formal Review	4,220,970	3,801,570	310,650	249,150
Approved	5,428,350	4,862,600	187,850	150,310
Under Construction	7,753,050	7,427,350	260,250	136,050
GRAND TOTALS	17,402,370	16,091,520	758,750	535,510

<sup>\*</sup> Includes all office projects in the greater downtown area and the South of Market area for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved. It does not include projects in the Rincon Point - South Beach or Yerba Buena Center Redevelopment Areas for which no Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission, as it is not possible to know what development will be approved in these areas. It does not include Mission Bay as no formal proposal has been submitted to the City and the project is still in early planning stages.

SOURCE: Department of City Planning.



### APPENDIX D: CUMULATIVE IMPACT ANALYSIS METHODOLOGY

### Travel Demand

Travel demand from the 16.1 million gross square feet of net new cumulative office development and 535,000 gross square feet of net new cumulative retail development in downtown San Francisco has been estimated using a <a href="land-use">land-use</a> approach for trip generation. Future travel into the downtown has been assumed to be a result of construction and occupancy of downtown office and retail space. The Office of Environmental Review of the Department of City Planning (DCP) has identified office projects in the greater downtown area as being under formal review, approved or under construction. Table C-1 shows the list of projects separated by review status and includes Assessor's Block number and DCP case number for each project. Table C-2 contains the total gross square feet of office and retail space for each review status category. The information contained in these tables represents the best data available from the Department of City Planning at the time of preparation of this document.

The list of projects shown in Table C-l and the development totals shown in Table C-2 include all office projects in the greater downtown area and the south of Market area that are under construction or have been approved, and all projects for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission. Projects that were not definitive and/or appear to be inactive or withdrawn by the project sponsor were not included in the cumulative analyses.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit.

Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution are



predicated on the assumption that housing would be available in the City. Thus inclusion of residential projects would be double counting of project generated travel.

Two redevelopment areas (Yerba Buena Center and Rincon Point - South Beach) and one private development (Mission Bay) are located in or near the greater downtown area. In the redevelopment areas the majority of building sites do not yet have Land Disposition Agreements (LDA) approved. Until such time as specific LDA's are approved, no estimate of travel demand can be made (thus, parcels for which no LDA exists have not been included in the cumulative Development in the Yerba Buena Center (YBC) Redevelopment Area will be in accordance with the YBC Redevelopment Plan, as amended. Possible land uses that would be in accordance with the Yerba Buena Center Redevelopment Area Plan include commercial entertainment, convention facility (in plact), cultural, downtown support service, exhibit/ballroom space, hotel rooms, institutional, light industry, market-rate dwelling units, subsidized dwelling units, office, park or plaza, pedestrian concourse, parking and, retail./3/ Possible land uses in the Rincon Point - South Beach Redevelopment Area include hotel, housing, office, open space, public parking, retail and, warehouse uses./4/ Mission Bay has not been included in the cumulative analyses as no application has been submitted to the City and it is uncertain what formal proposal may be made.

Existing office and retail space that would be replaced by new buildings was subtracted from the proposed new construction to better approximate the impacts the new buildings would have on transportation facilities. As shown in Table C-2, net new office and retail space is less than total new construction as a result of subtracting out existing office and retail space on sites proposed for new buildings. ("Net new" space is used to refer to the amount of new construction in excess of existing space on each site in terms of gross square feet of floor space. It does not refer to net leasable or net rentable floor space).

Estimates of future travel have been made using trip generation rates of 17.5 person trip ends (one way trips) per 1,000 net leasable square feet of net new office space and 100 person trip ends (pte) per 1,000 gross square feet of net



new retail space./1/ Gross square feet of office space was converted to net leasable square feet by assuming an efficiency factor of 80%. The retail space has been assumed to be primarily "ground-floor retail" which would serve the office building users. Based upon survey data collected at the Embarcadero Center, approximately 45% of the travel generated by "ground-floor retail" uses has been assumed to be oriented to the office uses on-site and is already included in the office trip generation rate. Thus, 55% of the retail trip generation has been assumed to be "new" to each site./2/

P.M. peak-hour travel from the cumulative development was assigned to modes of travel based upon the regional distribution and modal split shown in Table D-1. During the p.m. peak hour about 20% of the office travel and 10% of the retail travel was assumed to occur. Of the office travel approximately 90% [during peak-hours] was assumed to be work-related and 10% was assumed to be other travel. On a daily basis, office travel was assumed to be 57% work-related and 43% other travel./5/

To calculate vehicle trip ends, average automobile occupancies were assumed for each regional area based upon available data. Currently, commute travel to the East Bay is about 1.8 persons per vehicle; the north Bay is about 1.5 persons per vehicle; and to the Peninsula is about 1.2 persons per vehicle./6/ San Francisco auto occupancy was assumed to be 1.4 persons per vehicle./7/

A basic assumption in all of the transportation analyses is that existing regional distributions and modal splits would continue into the future unchanged. Thus, the implicit assumption has been made that about 40% of the future employees would live in San Francisco. If housing is not available in the City then a greater impact than noted would result on the commute corridors into the City from the North Bay, East Bay and Peninsula. If housing is not available in the City, however, the impact on the MUNI would be less than noted because City residents are the majority of Muni users.

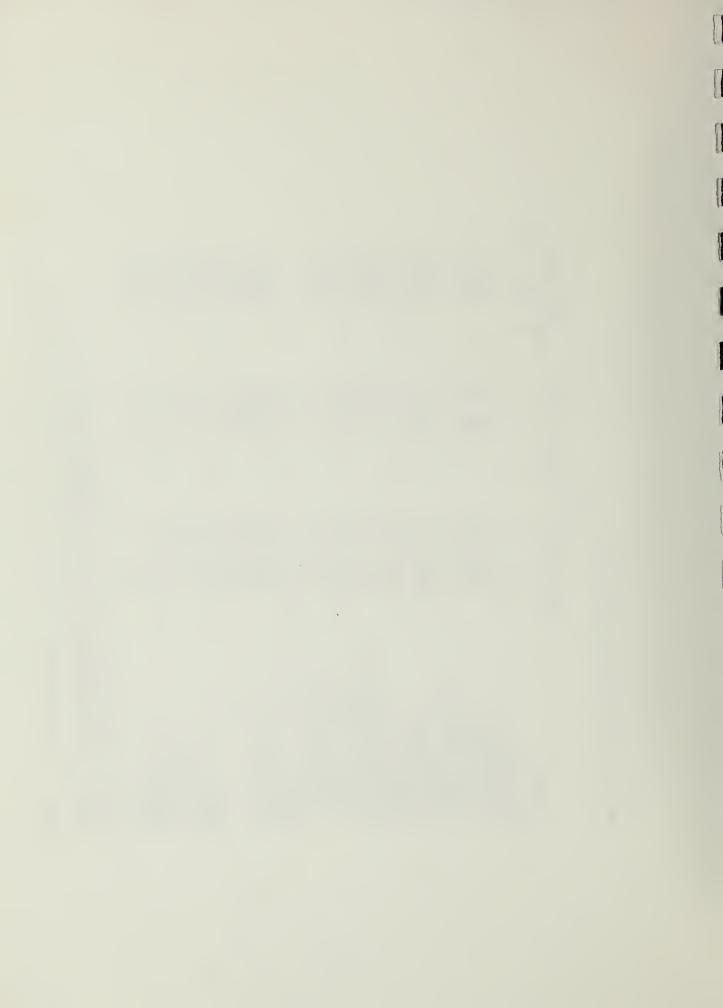


TABLE D-1: TRAVEL DISTRIBUTION AND MODAL SPLIT

vel	***	3.0 7.0 1.0 89.0	10.0 90.0	90.0 80.0 10.0	10.0 80.0 10.0	25.0 0.0 25.0 0.0 50.0	38.0 62.0 0.0	70.0 30.0 0.0	
RETAIL Travel	Mode	Auto Muni BART Walk 8	Auto 10 Muni 90	Auto 10 Muni 80 BART 10	Auto le Muni 80 BART le	Auto 24 Muni (BART 29 SamT (SPRR 50	Auto 38 BART 65 A-C	Auto 70 GGTB 30 GGTF 0	
RET	. * %	84.0	1.0	2.0	2.0	3.0	6.0	2.0	
veT	3e    *	20.0 20.0 0.0 78.0	15.0 85.0	12.0 69.0 19.0	13.0 38.0 50.0	50.0 0.0 30.0 10.0	13.0 79.0 8.0	70.0 20.0 10.0	
Other Travel	Mode	Auto Muni BART Walk	Auto Muni	Auto Muni BART	Auto Muni BART	Auto Muni BART SamT SPRR	Auto BART A-C	Auto GGTB GGTF	
1	,**!	33.0	11.0	13.0	7.0	8.0	20.0	8.0	
OFF ICE	96   *	9.0 61.0 1.0 29.0	31.0	29.0 62.0 9.0	26.0 52.0 22.0	44.0 3.0 19.0 7.0	33.0 37.0 30.0	58.0 35.0 7.0	
Work Trave	Mode	Auto Muni BART Walk	Auto Muni	Auto Muni BART	Auto Muni BART	Auto Muni BART SamT SPRR	Auto BART A-C	Auto GGTB GGTF	
اخ	Geog.	7.0	15.0	13.0	5.0	18.0	30.0	12.0	
	Geographic Area	San Francisco Downtown/Northeast (East of Van Ness, North of Market to the Embarcadero,	Northwest (Richmond, Marina Mastern Addition)	Southwest (Sunset, Parkside, Ingleside, Excelsior, Twin Poaks and Honar Market)		Peninsula (San Mateo and Santa Clara Counties)	East Bay (Aiameda and Contra Costa Counties)	North Bay*** (Marin and Sonoma Counties)	

\* Percent of travel with origins or destinations in each geographic area. \*\*Percent of travel in each geographic area using listed mode of travel. \*\*\*GGTB stands for Golden Gate Transit Bus; GGTF stands for Golden Gate Transit Ferry.

SOURCE: San Francisco Department of City Planning, TJKM, Environmental Science Associates.



The availability of short-term parking was estimated in an area within 1000 feet of the project (which was assumed to represent a 5 minute walking time). Projects proposed and under construction that would generate short-term parking demand within the 1,000 ft. radius area were identified and the short-term parking demand was summed to give a projection of short-term demand. Long-term parking demand was based upon the number of expected work-related auto trips into the downtown. Parking supply was estimated over the greater downtown and South of Market area as travel time from parking space to final destination was no longer assumed to be the primary determinant for parking selection.

Vehicle travel and parking demand have been based upon demand projections and are unconstrained by the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into downtown is essentially fixed at existing levels as major construction would be required to add new capacity. Current levels of vehicle traffic on the freeway and bridge system are at or near capacity. Thus, if the projection of person trip ends in autos is assumed to be correct, the levels of vehicle occupancy would have to increase in the future as the freeway and bridge system could not handle an appreciable increase in autos at the peak hour. If vehicle occupancy were to increase, vehicle trip ends and subsequent parking demand would be less than projected. Alternately, the peak hour level of demand could spread into hours adjacent to the peak hour (as is currently happening). However, there is a finite limit as to how far the peak can spread over time and still allow business to function.

Transit demand has been projected based upon existing travel patterns and is not dependent upon the availability of transit capacity. Two levels of operations (load factor) calculations have been made. One load factor has been calculated based upon existing capacity and is intended to represent conditions that would result if <u>no</u> improvements are made to the transit system. The second load factor is calculated based upon forecast capacity (as defined in each agency's five-year plan) and is intended to portray conditions that would result if planned, scheduled improvements are made.



## Intersection Analysis

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service. For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E. Table D-3 shows the definitions of Levels of Service related to v/c ratio.



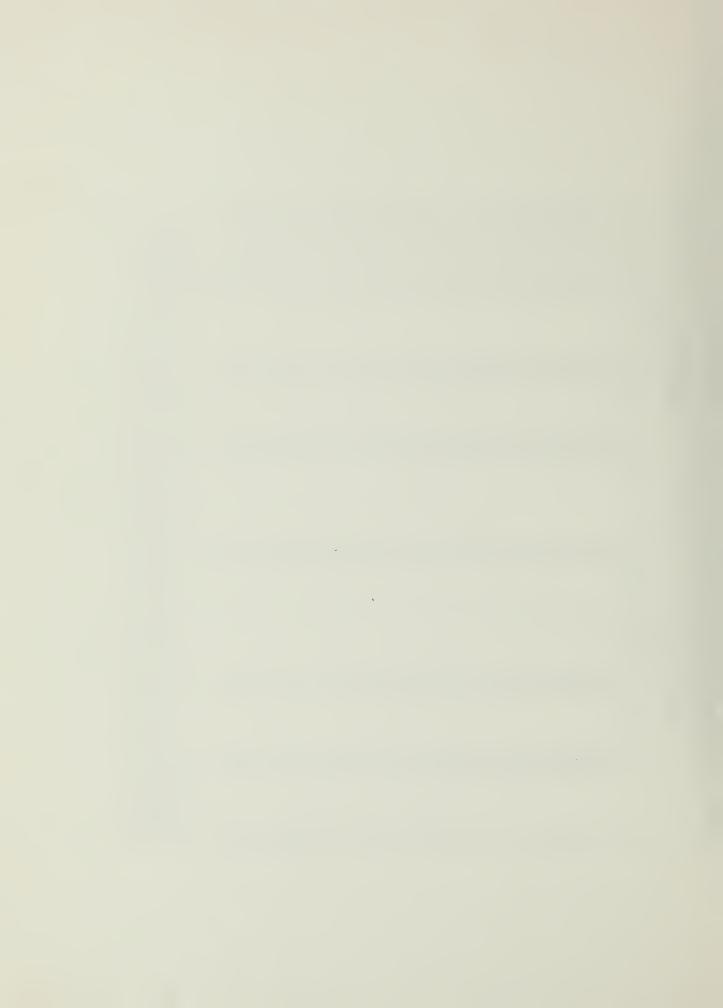
TABLE 0-2: EXISTING AND PROJECTED MUNI LOAD FACTORS\* (PM PFAK HOUR -- OUTBOUND DIRECTION)

LOAD FACTORS

RIDERSHIP

		FI	uture				uture	1 1 1 1 1
ine	Existing	w/o project	pro ject	w/project	Existing	W/O project	w/project	project
	1453.	1963.	12.	1975.	0.93	1.26	1.27	0.01
	640.	874.	5.	979.	=:-	1.52	1.53	0.01
	474.	. 599	4.	. 699	1.10	1.54	1.54	0.01
	520.	707.	٠,	706.	1.08	1.46	1.47	0.01
	467.	630.	۵.	634.	1.08	1.46	1.47	0.01
	981.	1503.	o;	1511.	0.94	1.44	1.45	0.01
	544.	934.	4.	838.	N.84	1.29	1,29	0.01
	407.	624.	۳.	627.	0.77	1.18	1.19	0.01
	657.	1007.	5.	1012.	0.74	1.14	1.14	0.01
6	468.	717.	4.	721.	0.89	1,36	1.37	0.01
	184.	281.	٠,	283.	0.64	96.0	0.98	10.0
	451.	691.	4.	695.	0.85	1.31	1.32	0.01
	1038.	1590.	6	1599.	0.92	1.41	1.42	0.01
	205.	313.	2.	315.	0.71	1.09	1.09	0.01
	344.	486.	۳,	489.	0.68	90.0	0.47	0.01
	632.	924.	5.	929.	0.88	1.28	1.29	0.01
	643.	986.	5.	991.	0.85	1.30	1.31	0.01
	145.	204.	_:	205.	0.58	0.81	0.81	0.01
	657.	941.	5.	.946	1.07	1.54	1.55	0.01
	413.	565.	3.	568.	96.0	1.31	1.31	0.01
	476.	619.	۵.	623.	0.79	1.03	J.∩4	0.01
	1963.	2748.	16.	2764.	1.01	1.4	1.42	0.01
	453.	619.	4.	623.	1.26	1.72	1.73	0.02
	272.	372.	۲.	374.	96.0	1.32	1.33	0.01
	119.	167.	<u>-</u> :	168.	0.41	0.58	0.58	0.01
	184.	258.	۲.	260.	0.43	0.60	0.60	0.01
	393.	596.	<b>~</b>	. 599	0.99	1.50	1.51	0.01
	561.	757.	5.	762.	0.00	1.21	1.22	0.01
	447.	685.	٠,	689.	1.10	1.68	1.69	0.01
	416.	588.	3.	591.	0.83	1.17	1.17	0.01
	606	1393.	7.	1400.	0.84	1.29	1,29	0.01
~	5725.	8773.	47.	8820.	90.0	1.47	1.47	0.01

\*The Toad Factor is the ratio of ridership to existing capacity, where capacity is calculated from the recommended maximum loading of the transit vehicles which is 150% of seated capacity. As estimates of load factors, these should be regarded as approximate. Muni cordon points, where the ridership and capacity counts were made, do not necessarily correspond precisely to the point of maximum loading on each line. The future load factors have been calculated using existing capacity.



TABL	E D-3: VEHICULAR LEVELS OF SERVICE		
Leve Serv		Volume/Cap v/c Rat	
A	Level of Service A describes a condition where the approach an intersection appears quite open and turning movements of easily. Little or no delay is experienced. No vehicles of longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	are made wait	0.60
В	Level of Service B describes a condition where the approace intersection is occasionally fully utilized and some delay be encountered. Many drivers begin to feel somewhat restriction groups of vehicles. The traffic operation can be described as very good.	ys may ricted	0.61- 0.70
С	Level of Service C describes a condition where the approach intersection is often fully utilized and back-ups may occuturning vehicles. Most drivers feel somewhat restricted, objectionably so. The driver occasionally may have to was than one red traffic signal indication. The traffic operation generally be described as good.	ur behind but not it more	0.71- 0.80
D.	Level of Service D describes a condition of increasing rescausing substantial delays and queues of vehicles on approto the intersection during short times within the peak per However, there are enough signal cycles with lower demand that queues are periodically cleared, thus preventing exceptack-ups. The traffic operation can generally be described fair.	oaches riod. such essive	0.81-
Ε	Capacity occurs at level of service E. It represents the vehicles that any particular intersection can accommodate capacity there may be long queues of vehicles waiting up-sof the intersection and vehicles may be delayed up to seve signal cycles. The traffic operation can generally be desay poor.	. At Stream eral	0.91-
F	Level of Service F represents a jammed condition. Back-up locations downstream or on the cross street may restrict of prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through intersection vary from signal cycle to signal cycle. Becathe jammed condition, this volume would be less than capacitation.	or n the ause of	1.00
	pacity is defined as Level of Service E. CE: San Francisco Department of Public Works, Traffic Div Engineering, 1965.	ision, Bure	au of

SOURCE:



## Employment Trend Approach to Cumulative Analysis

In this and other San Francisco EIRs, a <u>land-use</u> type of approach has been used to estimate the transportation impacts of both the proposed project and cumulative development. An alternate type of approach is to forecast travel demand based upon regional projections of employment share (<u>employment trend</u> approach)./8/ Briefly, the fundamental differences between (and limitations of) the two approaches are:/9/

The land-use approach (as it has been applied in this EIR) has used net new office space actually proposed or under construction (less space in buildings demolished to make way for new buildings) as the basis for travel generation. The land-use approach assumes that literally all of the currently proposed development in the downtown area will be constructed and fully occupied within the time frame of the 135 Main Street project development and occupancy. No allowance has been made for less than 100 percent occupancy, for proposed developments that are never constructed, or for those which would not be occupied within the time frame of the 135 Main Street project.

The employment trend approach generates a total increase in employment in downtown that has taken account of loss of employment as industries and offices move out of the City, replacement of one type of industry with another (industry shifts), as well as, replacement of existing office space with new office space. The employment trend approach makes no implicit assumptions concerning occupancy rates or actual square footage of development constructed; rather, it generates total employment increases from a standpoint which assigns jobs by metropolitan sector (area) based upon extrapolation of past trends and which considers long-term industry shifts to, within, and away from each area.

Note that neither of the two approaches has attempted to project future changes in modal split.



To illustrate the differences in projections resulting from the two approaches, Table D-4, following, shows the total employment projections by the two methods (and the project's share thereof), the regional distribution of trips, and Muni's share of the new transit travel (and the project's share thereof).

As shown in the table, the <u>employment trend</u> approach predicts about 15 percent fewer employees in the downtown and about eight percent more riders on the Muni than does the <u>land-use</u> approach. The <u>employment trend</u> approach would thus approximate the transit demand impacts discussed on pp. 14-15 of the EIR.

TABLE D-4: COMPARISONS OF LAND-USE AND EMPLOYMENT TREND APPROACHES

Approach	Downtown Employment Increase	Project Share*	Regi S.F.	onal T	rip Sh		Muni Peak-hour Increase**	Project Share***
Land Use	64,400	1.6%	49%	16%	24%	11%	12,000	1.5%
Empl. Trende (maximum)	+ 56 <b>,</b> 100	1.9%	50 <b>-</b> 54%	19%	17 <b>-</b> 21%	10%	12,900++	1.5%

NOTE: As explained in the text, comparisons between the entries for the two approaches must be made with the understanding that the <u>land-use</u> approach reflects increases in employment and transit demand based solely upon increases in downtown office space, while the <u>employment trend</u> approach reflects total increases therein based upon historical trends. The differences among the regional trip share figures reflect these and the other differences between the two approaches.

<sup>\*</sup>Employment generated by the proposed 135 Main Street project, as a percent of the cumulative downtown employment increase.

<sup>\*\*</sup>The Muni peak-hour increase is a demand projection (based upon existing and long-term employment trends) that is not dependent upon available or expected transit capacity.

<sup>\*\*\*</sup>Muni peak-hour trips generated by the proposed 135 Main Street project, as a percent of the cumulative downtown Muni peak-hour increase.

<sup>+</sup>These figures, represent the worst-case analysis under the employment trend approach reviewed and accepted by MTC, ABAG and Muni. Note that the land-use approach entries assume that an additional net new 16.1 million gross square feet of office space will come on line by late 1990.

<sup>++</sup>Based on 54 percent regional trip split to San Francisco (worst-case).



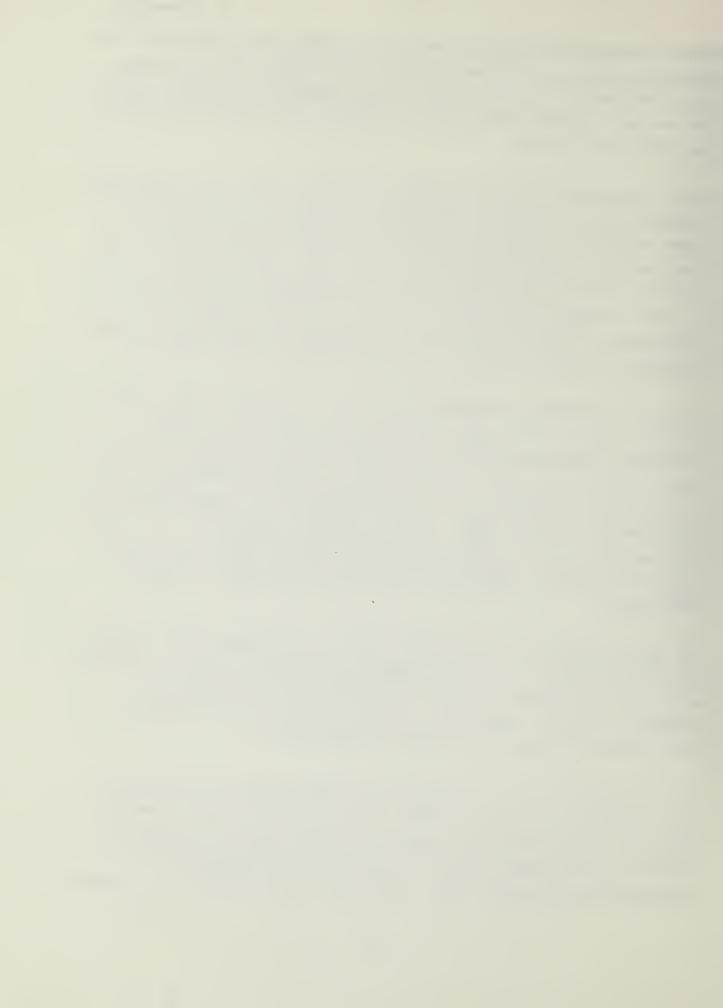
Several considerations concerning both of the methods need to be noted. The <a href="land-use">land-use</a> approach, as it has been applied in San Francisco EIR's, analyzes impacts for the p.m. peak hour, whereas the <a href="employment trend">employment trend</a> approach analyzes the a.m. peak. Several reasons exist as to why one peak (or the other) may be the better one to analyze.

First, the p.m. peak may be more useful to analyze, in that actual observation shows that the p.m. peak has a greater overall effect on the local street network and transit system in the downtown area than does the a.m. peak, as more travel takes place during the p.m. peak. Also, transit service is more inclined to differ from scheduled times during the p.m. peak than during the a.m. peak, as operational delays have had an 8- to 10-hour period over which to accumulate. Finally, the on-ramps to the freeway/bridge system are greater bottlenecks (in the p.m. peak) than are the off-ramps (in the a.m. peak).

Conversely, the peaking characteristics of the a.m. peak may be more useful in that they are much sharper than those of the p.m. peak (i.e., a greater percentage of the peak-period travel occurs during a single hour). Also, as a result of the bridge system into San Francisco, travel inbound into the City is much easier to document, as tolls are collected on the inbound direction on the Golden Gate and Bay Bridges. Finally, a greater proportion of the travel occurring during the a.m. peak is employment-related; the p.m. peak includes shopping and pleasure trips which are not directly affected by increased office space.

The <u>land-use</u> approach, as it has been used in this Supplemental EIR, examines the p.m. peak because it has been observed to be the worst case for congestion on the City transportation system. This analysis does not reflect the spreading of the p.m. peak that is currently occurring, as all of the new trips have been assumed to take place in a single hour.

While the <u>land-use</u> approach assumes all new office space is fully occupied, the assumption of a functional vacancy rate of 5 percent is not uncommon./8/With 16.1 million square feet of new office space assumed in the <u>land-use</u> approach to be occupied by 1990, a 5 percent vacancy would amount to approximately 805,000 square feet, representing 7,200 employees (at 250 square



feet per employee), 600 of which would ride Muni in the p.m. peak hour. This adjustment for vacancy would thus reduce Muni peak-hour impacts in the cumulative analysis stated above by these 600 riders.

The <u>land-use</u> approach calculations have assumed transit capacity to be fixed at existing levels. The OER memorandum/8/ points out, "It should be recognized that transportation is a more 'elastic' resource with many options for expansion including increasing existing capacity by using articulated vehicles, expanded car pool and van pool programs and increasing the peak commuter period through flex-time programs, among others."

If future office development does not occur along the lines of the past long-term trends as assumed in the employment trend approach, then the projections made in Working Paper I would be revised. The average annual growth during the period 1965-1980 was less than the growth per year proposed, approved, or under construction for the period 1980-1984. The employment trend approach assumes average growth through 1990 would be at the lower historic rate, reflecting activity fluctuations from the current rate including slowdowns due to changing business conditions.

Until a forecast exists to determine how the current decade's cycle of development may differ from the past, a judgment of the applicability of results from Working Paper I may not be made. Consequently, this EIR has retained the land-use approach and presented this comparison of the employment trend approach. Both methods should be looked upon as describing potential scenarios of future conditions.

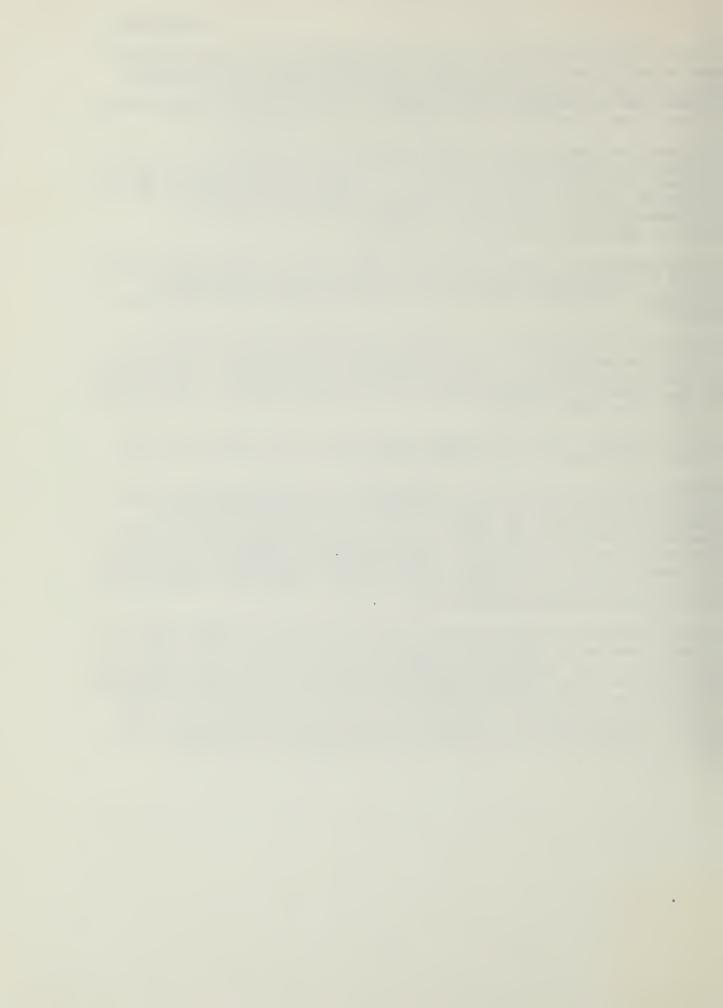
## NOTES

<sup>/1/</sup> Land uses from Draft Second Supplement Yerba Buena Center Final Environmental Impact Report, San Francisco Department of City Planning May 28 1982.

<sup>/2/</sup> Land uses from Rincon Point - South Beach Redevelopment Area, San Francisco, California, Final Environmental Impact Report/Environmental Impact Statement, San Francisco Department of City Planning certified November 5. 1980.



- /3/ The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the <u>Guidelines for Environmental Impact Review</u>, Transportation Impacts Department of City Planning, October 1980 and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.
- /4/ Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.
- /5/ The percentage of work and non-work trips is from the <u>Guidelines</u> (see note 1) and from <u>Urban Travel Patterns for Hospitals</u>, <u>Universities</u>, <u>Office Buildings</u>, and <u>Capitols</u>, <u>Report No. 62</u>, <u>National Cooperative Highway Research Program</u>.
- /6/ East Bay auto occupancy is from data collected at the Bay Bridge toll plaza by the Metropolitan Transportation Commission; North Bay auto occupancy is from data collected at the Golden Gate Bridge toll plaza by the Golden Gate Bridge, Highway and Transportation District; Southern Peninsula auto occupancy is an estimate from CalTrans.
- /7/ The occupancy rate is from The Downtown Traffic and Parking Study, San Francisco Department of Public Works, 1970.
- /8/ Department of City Planning, Working Paper I, Projection of Long-range Transportation Demand, May, 1982, prepared in cooperation with the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Municipal Railway (Muni). Employment trend data was compiled by ABAG from trends in County Business Pattern (U.S. Department of Commerce, Bureau of the Census, March 12, 1979), with 1979 as the base year for future projections and regional distributions. Modal split data are from the 1975 Travel Survey prepared by MTC.
- /9/ The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.



TARIC C 1 .	CAN EDANCISCO	ALD DOLL HEAT	C VOMMITS	070 1091

STATION: 939 Ellis Street (1979) and 9	900 23rd Street (	1980-81),	San Fra	ancisco
POLLUTANT:	TANDARD	1979	1980	1981
OZONE (0 <sub>3</sub> ) (Oxidant) 1-hour concentration (ppm /a/)				
Highest hourly average 0. Number of standard excesses	.10/b/ 0.12/c,d/ (state)	0.08	0.09 0	0.97 0
Expected Annual Excess (natio		0.0	0.0	0.0
CARBON MONOXIDE (CO) 1-hour concentration (ppm)				
Highest hourly average Number of standard excesses	35/c/	20 0	10 0	8 0
8-hour concentration (ppm) Highest 8-hour average	9/c/		Ü	
Number of standard excesses	9/0/	13.8 1	7.5 0	5.3 0
NITROGEN DIOXIDE (NO <sub>2</sub> )				
l-hour concentration (ppm) Highest hourly average	0.25/b/	0.16		0.11
Number of standard excesses		0	0	0
SULFUR DIOXIDE (SO <sub>2</sub> ) 24-hour concentration (ppm)				
Highest 24-hour average Number of standard excesses/e	0.05/b/ e,f/	0.034 0	0.018 0	0.016 0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m³/g/) Highest 24-hour average	100/b/	117	173	103
Number of standard excesses/1  Annual concentration (ug/m <sup>3</sup> )	f/	1	6	1
Annual Geometric Mean ' Annual standard excess	60/b/	42.0 No	52.1 No	56.0 No

<sup>/</sup>a/ ppm: parts per million.

/g/ ug/m<sup>3</sup>: micrograms per cubic meter.

BAAOMD, Air Pollution in the Bay Area by Station and Contaminant; and CARB, California Air Quality Data.

<sup>/</sup>b/ California standard, not to be equaled or exceeded.

<sup>/</sup>c/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).

<sup>/</sup>d/ The national ozone standard was revised from 0.08 ppm to 0.12 ppm in January 1979 and is now expressed in terms of the Expected Annual Excess, which is a three-year average of annual excesses of the 0.12 ppm value. /e/ The sulfur dioxide standard is considered to be exceeded only if there is a concurrent excess of the state ozone or suspended particulate standards at the same station. Otherwise, the national standard of 0.14 ppm applies. /f/ Number of observed excess days (measurements taken once every six days).

